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SCRAMBLING OF SATELLITE TV SIGNALS

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

SCRAMBLING OF SATELLITE TELEVISION SIGNALS

JULY 31, 1986

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SCRAMBLING OF SATELLITE TELEVISION SIGNALS

THURSDAY, JULY 31, 1986

U.S. Senate,
Committee on Commerce, Science, and Transportation,
Washington, DC.

The committee met, pursuant to notice, at 9 a.m., in room SR-253, Russell Senate Office Building, Hon. John C. Danforth (chairman of the committee) presiding.

Staff members assigned to this hearing: Dale Brown, professional staff member; Dan Phythyon, staff counsel; and Tom Cohen, minority staff counsel.

OPENING STATEMENT OF THE CHAIRMAN

The Chairman. I have an opening statement, I am going to read in the record.

Good morning. Welcome to the Senate Commerce Committee hearings on the issue of scrambling of satellite-delivered video programming.

We frequently deal with communications issues that arouse little interest outside the industries and constituencies involved. This issue is different. It has generated a great deal of emotion and confusion throughout the country. Every one of our offices has received letters, phone calls, and personal visits from dishowners and dish sellers who are concerned about their ability to retain access to programming and about their livelihoods.

The scrambling issue traces back to the provision in the 1984 Cable Act that authorized home reception of satellite cable programming. Congress provided that home dishowners were free to receive these signals from private viewing, so long as the signals were not scrambled and marketed. At the same time, Congress affirmed the programmers' right to protect the distributions of their product and to receive payment from dishowners, for it, just as they receive payment from cable subscribers.

In effect, the 1984 amendment established once and for all the legitimacy of the home satellite dish industry, but it also provided that impetus for scrambling of signals. Since virtually the date the 1984 act took effect, the cable and dish industries have been in an uproar over scrambling.

Early disputes involved whether satellite programming distributers really had the right to scramble their programming and charge for it. Dishowners were understandingly reluctant to give up or pay for programs they had been getting for free. I believe, however, that nearly all elements of the dish industry now recognize that scrambling and payment for signals is appropriate. Another question was whether a single scrambling technology would be used, or whether dishowners would have to buy separate, incompatable decoders for each scrambled service. Concerns have eased here, as well, now that the M/A-Com VideoCipher II technology has become the de facto scrambling standard. A related concern was whether there would be enough descramblers available to serve the dish community before scrambling occurred. After some early glitches, the decoder manfacturing and distribution mechanism appears to be on track.

The issues that remain hotly disputed include whether consumers should be guaranteed access to scrambled programming, especially network programming, what prices consumers will be charged for scrambled programming, and how this programming will be distributed. It seems to me that the Federal Government's role in this dispute is twofold—we want to ensure that dishowners, especially those in rural areas, have access to a wide range of video programming at reasonable prices. At the same time, we should recognize the proprietary interests involved here, and should try to let the programming marketplace work with as little Government intrusion as possible. As we examine the issues today, we should keep in mind that scrambling is a relatively new phenomenon. This is a very young and fluid marketplace. HBO began scrambling full time in January of this year, and any real competition to its marketing mechanism was not possible until May, when Showtime started to scramble its signal.

This hearing is designated to survey what has happened with scrambling thus far, and what is likely to happen with this marketplace in the future. A number of legislative approaches to scrambling issues have been introduced. The sponsors of these bills are well represented on the committee, and I look forward to hearing their views as well as those of the distinguished witnesses we have invited today.

The CHAIRMAN. I know some other Senators have statements they would like to make.

Senator Pressler.

OPENING STATEMENT BY SENATOR PRESSLER

Senator PRESSLER. Good morning, Mr. Chairman. Let me say that I think the subject we are addressing is one that is becoming increasingly controversial in our country. I was in South Dakota last weekend, and several people who own dishes spoke to me about their disillusionment and their concern.

I am pleased that we are holding this important hearing today. It is particularly timely, given the developments over the past 7 months. There are several issues which are of particular concern to me.

My State is largely rural, with many dishowners and small businesses who have a great stake in this debate. I am very concerned about them and the millions of viewers and small businesses around the country who will be directly affected by how these issues are resolved.

Too often I believe their interests are lost in the battle between the giants. It is our job to prevent that from happening. The big may be getting too big. The rights of dishowners, smaller cable operators, small equipment dealers, and small businesses should not be secondary to the interest of a few multibillion dollar corporations who may very well be in a position to unduly dominate this industry for decades to come.

Over the past weeks, I have heard many unsettling stories about the large multiple systems operators and the influence they have wielded in this area. I am not here to pass judgment this morning, but I have many questions and will be watching with keen interest the developments of this industry over the next few months.

If this industry is to thrive in the marketplace without undue regulation, which I hope will be the case, it must be a truly competitive industry. The scrambling of satellite signals should open a whole new market in the packaging and distribution of a new technology. I view with great concern the intense concentration of market power in the cable industry.

We need a healthy, competitive distribution network, with equal access to programming in order to allow the marketplace to work correctly.

Frankly, I am nervous about some of the relationships between huge, multiple system cable operators and the programmers. Perhaps more worrisome is the sheer market dominant position of the largest cable operators over the rest of the industry.

Up to this point I have heard largely only one side of the story: my dishowners, dealers, small cable operators and others. But I must say it has been a fairly convincing one. I will be keenly interested in hearing the other side of the story as this hearing progresses.

Today's submitted testimony includes a lot of nice talk about how well the marketplace is working in the wake of the first scrambling initiatives. I have read where the dishowners are satisfied with how things are going so far. We have heard from a lot of dishowners over the past few weeks. The satisfied ones did not contact me.

Some of the testimony says that the disparity between the large cable system operators and the small operators has evaporated. My small cable operators do not think so, at least in the area of competing for the program signal distribution market.

It says programmers will not offer exclusive marketing territories, and are ready and willing to discuss credible alternative distribution systems. Again, I have heard conflicting stories.

We have also heard conflicting stories as to the technical capabilities of the hardware involved in the decoding process. Do decoders have sufficient channel capacity? Will homes with more than one TV set have to purchase multiple scramblers? In the area of network scrambling, will we be able to get enough translator applications processed and have the hardware in place to serve the white areas?

These are the kinds of things I hope we can flush out today. I hope the witnesses will be able to shed some light on these issues. The cable industry is at an important crossroads. Decisions made in the next few months will have a profound impact for years to come. We as a committee have an important responsibility to carefully scrutinize the developments and ensure that there is a level playing field for all actors involved.

I am confident that the marketplace can deliver fair prices and good services without excessive government interference. But to do that, we must have an environment with equal access to the product, without artificial distortions through market dominance.

Hopefully our antitrust laws are sufficient to take care of that problem. But I, for one, plan to take an active role in making certain that these issues are adequately addressed during this critical stage.

So, with that, I will end my formal statement so we can get on with the hearing and answer these and other important questions.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Gore.

OPENING STATEMENT BY SENATOR GORE

Senator GORE. Thank you very much, Mr. Chairman. And let me also thank you for agreeing to hold this important hearing. In my view it has been a long time coming, and it is reassuring to know that the committee has decided to take a close look at the enormous problems facing home dishowners and the industry that supports them.

I have a more lengthy prepared opening statement which I will put into the record at the appropriate time with your consent, but I do want to say a few words in my verbal statement here at the opening of this hearing. I am looking forward to the testimony of the witnesses today. There are some witnesses that I had hoped would be here, who could not be here.

If at the end of today's hearing, it seems that additional testimony is warranted, I would hope we could discuss the possibility of another session.

The issues that are going to be addressed here today have already been addressed at two hearings in the House, but this is the first opportunity that we've had here in the Senate to look at the facts surrounding satellite television scrambling.

Yesterday, Mr. Chairman, I introduced new legislation directly addressing what I believe to be the fundamental problem related to satellite television scrambling. Early last year, I introduced another piece of legislation, building upon an effort that I made in the House, beginning 3 years ago.

But yesterday's bill, I believe, focuses on the major impediment to a free marketplace. This bill is intended as a compliment to the bill introduced last week by our colleagues, Senator Ford and Senator Bumpers. And I am hopeful that together, these bills will form a solid basis for Senate action on this issue of such vital importance to millions of Americans.

The problem has become clear. By refusing to allow open competitive marketing of their signals through third-party distributors, monopoly programmers have shutdown a free market and driven a new promising technology into the ground.

How was this allowed to happen? Plans by cable programmers and the networks to scramble their signals have had a clear and devastating effect: Total chaos among home dishowners and the businesses that serve those customers. The ensuing confusion has threatened to derail a communications development that for once came first to rural Americans and the resolution of the problem is not yet in sight.

It is clear that the Congress would prefer that the marketplace resolve problems like the distribution of satellite television programming. However—and this is a key point, Mr. Chairman—the marketplace has not worked.

Consider the distortions in the satellite television marketplace. First, advertising supported programmers who have no reason to scramble are being coerced by major cable corporations to scramble or else be thrown off the cable systems which provide the lion's share of the revenue at the present time.

Listen to the quotation from the head of the top cable company in the United States quoted in the Wall Street Journal in February of this year. He is quoted as saying to the programmers when discussing the access of dishowners to their programming, quote: "We expressed a certain amount of displeasure. We were concerned that they not," they, the programmers, "that they not go off and think we would continue to promote and carry and pay for their services on cable while they were going around us with a competitive technology."

What is advocated, of course, is technological protectionism. Use the market power of the existing cable industry to shutdown a new competitor. And, of course, it's having the intended effect.

Here is a letter, Mr. Chairman, from the Christian Broadcasting Network, signed by Pat Robertson who is president of that corporation, and he is writing about this issue to one of the publishers of one of the magazines that lists the programs.

He says, quote: "We are at a point where it does not seem prudent to jeopardize 40 million households"—he is referring to the cable customers—"in order to preserve access to 1 million households," that is, the dishowners, "which may indeed be denied service under circumstances by the other major program suppliers."

Continuing to quote: "Our service has been good for them," talking about the cable operators, "but their cooperation has been good for us despite our strong feeling about open skies and free access. It doesn't make sense at this time to turn our backs on those who over the last 8 years have been providing us access to the homes of millions of Americans."

Now, Mr. Chairman, if you or I were selling advertising on a program that was beamed to Americans, we would have a natural interest in having as many viewers as possible. Therefore, it would not make sense for us to scramble unless we were fearful that we were going to lose other viewers by the actions of someone with market power over us.

That is exactly what is happening. An established industry is using its size and power to shutdown a new infant competitor.

A second distortion in the marketplace: Expensive decoders are being forced on to dishowners, even though no industry standards have been established.

Third, at least one programmer is actively engaged in the process of giving kickbacks to cable operators from the dishowners, even though the cable operators provide absolutely no services to the dishowner.

Now, understand how this works, Mr. Chairman. If you call HBO and you ask for their program—you are a dishowner—you say I would like to buy your program. They say fine. And you enter into an arrangement, and they charge you an extra $5 dollars per month which they then turn around and give directly to the cable operator that is nearest to your house.

That, in my opinion, is a kickback. It is the essence of being so-called cable friendly, to soothe the cable industry. The programmers are saying, well, look, we are forced by political pressure to sell this program to dishowners. We know you would rather that we did not do that, but we cannot just refuse to sell it to them at all. But, in order that you will not feel too uncomfortable about it, we are going to give you $5 for every dishowner that we sign up, even though you don't do a thing for that dishowner.

Again, technological protectionism.

Now, fourth, and perhaps most significantly, programmers who may have justifiable reasons to scramble to protect private property are refusing to sell their services at competitive terms to dishowners through third party distributors. Again, the essence of being cable friendly is the requirement that if you as a dishowner, are going to buy the program, you have to deal through a cable company or direct from the programmer with a kickback in the case of HBO to the cable company.

Mr. Chairman, there are those who will tell you that this marketplace is working. Don't be misled. It is not working. They will talk about the number of dishowners that have signed up already. They will not talk about the 99-plus percent who have not signed up. And most of them will not sign up because the prices charged are intentionally set at a level above the market clearing price, intentionally set at a level that will preserve the maximum area for cable as an expansion area.

It is time for Congress to act. Last year, along with my colleague, Senator Cochran, I introduced a bill to require the FCC to intervene with regulation as a last resort, where competition was not setting the prices if satellite television programmers were found to be acting anticompetitively.

I believed then and still believe that the FCC has a distinct role in this issue as the Federal Government's arbiter of national telecommunications policy.

The bill I introduced yesterday, to which I referred earlier, does not give the FCC a role in it. It mandates that programmers sell to any third party distributor that meets fair standards for them to preserve the reputation of the programmers, collect the bills, et cetera.

Any rules dealing with anticompetitive behavior must have teeth. It is not enough for us to urge programmers and cable interests to play fair. It is not enough to talk about the importance of this technology for those in rural areas if we fail to ensure that the home satellite dish will continue as an available telecommunications option for rural America.

Dishowners are willing to pay fair prices and willing to agree to competitive marketplace terms for scramble programming, but few of the companies who have the monopoly on premium satellite TV programs have agreed to sell their services at fair prices and through a competitive marketplace.

Instead, these programmers flatly state that they will charge dishowners prices that are two, three, four times, in some cases ten times greater than local cable customers pay for the same services.

The implication of these predatory rates, if not the stated motive, is that the dishowners must pay higher prices than cable customers in order to discourage the use of home dishes. That motive, to shutdown dish sales in cable-served areas, is reason enough to warrant serious action by the courts, if not the Congress.

Yet the vast majority of home dishowners do not even live within cable-wired areas. They live in rural areas that cable refuses to serve, areas where television information and entertainment programming is vital. In these areas, the anticompetitive behavior of the programmers and cable operators should be branded illegal and halted.

It is not surprising that these marketplace distortions I have referred to have occurred because the concentration among programming sources is alarming.

Two companies, HBO/Cinemax and Showtime/Movie Channel, control virtually 100 percent of the premium cable movie services and a large share of the other premium programs, like MTV, Nickelodeon and others are controlled by the Viacom Corp., the same company that owns Showtime.

And who owns HBO? Of course, Time, Inc. And Time, Inc. and Viacom are not simply holding companies. These are two of the biggest multisystem cable operators in the country.

I referred earlier to Telecommunications Inc. or TCI whose top official has threatened to drop any programmer who does not scramble.

Mr. Chairman, this is absolutely unacceptable. I am pleased, of course, that the Justice Department has an ongoing investigation into the efforts of some of these monopoly interests to shutdown the Earth station industry, but that investigation has dragged on for a long time and a Justice Department conclusion that corrects the marketplace distortion is unlikely for many more months into the future.

This week the FCC is expected to announce a notice of inquiry to look into the satellite television programming industry and that, too, is mildly heartening. But after all, it is only a general inquiry. And the FCC has known about this problem for years and they have so far just waited and waited until the home Earth station industry is on the verge of extinction, and now they have announced just a modest general inquiry.

Mr. Chairman, it does not take a year-long general study by the Justice Department of the FCC to realize that the distortions in this marketplace are severe and need immediate remedy. We simply cannot wait forever for those agencies to study the problem to death.

The antitrust laws are not an adequate remedy for this problem because they are not being made to work. The remedy must come from us here in the Congress. Open market competition is the only way to solve this problem. The removal of marketplace distortions will allow that competiton to take place.

I am confident that the bill I introduced yesterday, along with the Ford-Bumpers bill, will make that competition possible.

Mr. Chairman, in conclusion, I wish to thank you and my colleagues for your forbearance. We have been trying to get a hearing for almost 2 years on this issue and in look forward to digging into it today with the witnesses that will appear before us.

[The statement follows:]

Opening Statement of Senator Gore

Mr. Chairman, I am indeed gratified that the Commerce Committee is taking a renewed and serious interest in an area, which I have long considered critical to the citizens of my state and the nation. Today, satellite technology is bringing an abundance of information and entertainment into even the most rural parts of the nation. It is a technology which was developed initially at the taxpayers expense and it uses the public spectrum. It is a technology that must be used for the benefit of consumers and must not be allowed to be controlled by those who fear it as a competitive threat. At the same time, satellite earth station viewers must recognize that a fair payment mechanism must be developed if they are to be able to continue to view the many entertainment, educational, religious, news, sporting and public affairs programs available on satellite. Let us look briefly at where we have been to see where we are going.

The rapid growth of satellite technology and rsulting consumer benefits comes as a direct result of consumer demand and marketplace forces. In its decision in *Regulation of Receive-Only Earth Stations,* 74 FCC2d 205 (1979), the FCC removed the technical restrictions it had previously placed on satellite earth station antennas and deregulated the ground segment of satellite communications. This was an extension of the FCC's "Open Skies Policy" whereby maximum reliance was placed on marketplace forces to encourage the development and full exploitation of satellite technology.

At the time of the commission's deregulatory decision, the cost of an earth station was $100,000 or more. Immediately, thereafter, ingenious individuals from around this great land went to work building better and less expensive satellite antennas. At the prsent time, a complete system consisting of a dish, low noise amplifier, downconverter and receiver can be purchased and installed for $900–$2,500; and, the price continues to drop. This dramatic drop in price and expansion of service is a direct result of consumer demand, marketplace forces, and congressional intervention when needed to ensure that the marketplace works.

THE 1984 SATELLITE VIEWING RIGHTS PROVISIONS

In 1984, Congress was first called upon to step in and clarify what should be the law with respect to home satellite earth station reception. At the time, owners of home satellite earth antennas were being threatened by a number of satellite programmers for viewing their television signals. In fact, one home satellite earth station dealer was sued, ultimately unsuccessfully, by a cable television company for merely selling home satellite antennas.

During the Spring of that year, I introduced H.R. 5176 which was intended to amend the Communications Act of 1934 to clarify the policies regarding the right to view satellite transmitted television programming to the home and to eliminate barriers being raised by those who were trying to slow the remarkable growth of this industry and the consumer benefits which it provides. That bill affirmed the right of all home satellite earth station owners to receive and view for private, non-commercial purposes, satellite signals which were not scrambled and authorized the manufacturing and distribution equipment designed to receive those signals. That bill was necessary because the Communications Act of 1934 was silent on the question of non-commercial, home reception of satellite transmitted programming.

This clarification was designed to enable all Americans, especially those in more rural areas, to access the same types of information, education, sports, cultural and entertainment television programming. We also recognized that the satellite earth station industry, on numerous occasions before the Congress, had offered to compensate those satellite services which depend for their existence on the payment of fees. Industry representatives testified to this fact before the U.S. Senate and the U.S.

House of Representatives on several different occasions. Those offers were uniformally rejected or ignored by the satellite programming services.

Legislation was necessary two years ago to clear up the basic legality question. We did not and do not believe it is fair and certainly not in the public interest to allow satellite programmers to refuse to provide their product to home satellite earth station owners. I am proud to say that the satellite viewing rights provisions, which ultimately were adopted in the Cable Communications Policy Act of 1984, were taken in large part from this legislative initiative.

H.R. 5176 also proposed to do several other things. In particular, the bill required that satellite television programmers sell their scrambled signals to dish owners. As a last resort, the FCC was empowered to serve as a referee to resolve disputes. This part of my bill was not included in the legislation which passed two years ago. Nevertheless, as we have seen in the last two years the problems persist, indeed they are worse than before.

No sooner was the ink dry on the 1984 amendments to the Cable Communications Policy Act, than problems began to arise. There was a massive anti-earth station campaign launched by some within the franchised cable television industry and in fact sponsored by one of that industry's major trade associations. One advertisement which ran in many areas around the country featured a home satellite antenna with a large red slash through it, leaving the consumer with the implication that home satellite antennas were illegal. Unfortunately, I have been advised that this anti-earth station campaign continues to this day in some areas.

Also, two major satellite services announced plans to sell unscrambled satellite programming signals to home earth station users at prices some 1000% over the price that cable television operator paid for the same signals. These so-called "marketing plans" were put forth without any negotiations as required by the 1984 amendments.

It appeared that satellite program suppliers were being coerced by cable system operators to scramble satellite signals as soon as possible in order to stifle open competition between cable and the earth station industry. The plans which were proposed by these two companies were intended to force home earth viewers to pay unreasonable fees to watch unscrambled signals as a prelude to scrambling. I am happy to say that once the illegality of these plans was pointed out, these services abandoned them.

The issue of unreasonable pricing still exists, however. Most of the satellite services which have announced an intention to scramble and deal with home earth station owners, have also announced a price for viewing by home earth station owners which far exceeds the price which cable subscribers pay for viewing the identical programming. I have studied this matter in some detail, and I am confident in the conclusion that the reason for this pricing policy is that there is no open and free marketplace for dish owners to purchase scrambled satellite programming. Instead, pricing policies for dish reception are controlled by cable TV companies. The nation's franchised cable industry is, in fact, in control of the nation's satellite programmers. In many cases, the satellite programmers are in fact part of the same company as the nation's largest cable TV companies. In all cases, the nation's cable television operators are the biggest customers of the satellite services and are therefore able to dictate to them the prices and terms of their dealing with other entities such as home earth station owners.

Unfortunately, we have seen little competition developing for serving home earth station owners. Neither of the major subscription services, (HBO/Cinemax and Showtime/The Movie Channel) perceive that they have a real incentive to serve home earth station owners, unless it is done through cable television companies. They are both part of conglomerates which own many cable systems. Neither of these companies has authorized companies other than the nation's franchised cable television companies to retail their signals to home dish owners. Several such companies have in fact tried to obtain these "third party" distribution rights. None has been successful. The most recent attempts have been made by the National Rural Electrical Cooperative Association which has not yet received a positive response. Consumers who have made a substantial investment in the hardware necessary to receive satellite programming are asking why they cannot receive that programming at fair prices.

The more I look at the marketplace, the more I am convinced that it is being controlled for the benefit of a few of the largest cable TV operators.

An example of this anti-competitive behavior can be found in the price, at which satellite services are sold for distribution to home earth station owners, versus the price at which they are sold for distribution to cable television operators. For example, CNN charges cable television operators, at most, 17 cents per cable TV subscriber per month. At the very same time, these operators are paying $1.00 per CNN home satellite subscriber per month. Why would a cable company agree to such an increase? The answer is simple. By paying more for home satellite subscribers, it protects its investment in its own cable plant by insuring that home satellite earth station viewing will not be competitive to cable subscriptions within its service areas. It also sets a standard which will enable CNN to "hang tough" in its negotiations with other programming packagers with which CNN may choose to deal in the future. After all, if the largest customers of CNN can "only" negotiate a $1.00 rate for earth station reception, what chance do others have? Through this method, the largest companies are able to maintain their monopoly position.

Cable television operators were deregulated under the Cable Policy Act, a bill which I strongly supported and still do. I am concerned, however, that the newly deregulated cable television industry is attempting to prevent competition from the newest technological entrant on the block—the satellite earth station industry. If the satellite services were really serious about selling scrambled signals to home earth station owners, they would do so through companies which have a real incentive to aggressively price and market those signals. Instead, they have chosen to deal with only the nation's franchised cable operators. If a home dish owner wishes to view scrambled satellite programming, one way or other, he will end up paying the local cable system. And worse than that, virtually all of the contracts between the satellite programming services and the nation's cable television operators restrict cable television operators from providing satellite signals any where outside of their franchised areas and immediately adjacent areas. Cable operators do not compete against each other. And this I think is a key. For this marketplace to work effectively, we need one of two things to happen. Either independent program distributors, unaffiliated with a cable television company, must be able to purchase satellite programming at the same rates as cable operators do, or cable television companies themselves should be free to sell satellite services not just in their own franchised areas, but in other franchised areas and outside of franchised areas. And they should not have to pay higher prices to programmers for dish viewers than for cable viewers. Under either scenario, I see real competition developing, service expanding to consumers in rural areas, and satellite technology providing great consumer benefit.

Another area that should be spotlighted concerns maintaining access by Americans, particularly in rural areas, to the various services which are available today. Several of the nation's broadcast networks have announced an intention to scramble their satellite feeds to their local affiliates in order that such feeds not be viewed by home dish owners. Yet not every one in America can view the signals of a local affiliate either through that local affiliate. Scrambling feeds at this time, it seems to me is putting the cart before the horse. Some 40,000 homes cannot access CBS transmissions according to CBS. That is over a million people. They should not be ignored.

I have been told that the reason that the network wishes to scramble its feeds is in order to protect its local affiliates. The argument presumably is that home satellite dish owners will watch network feeds rather than watch the local station, if there is one. It seems to me that argument stands broadcasting on its head. The broadcasters that I know take great pride in their ability to attract audiences because of their quality local programming. Local news, public events, and public affairs are cornerstones of our television broadcasting system. This programming is a service to the local community and results in revenues to the local broadcaster because people watch it. This local programming is not available by satellite. I don't believe that many home satellite earth station owners who can view a local network affiliate off-the-air will choose to view the network feed on the satellite. Scrambling at this time is a solution in search of a problem.

I have directed most of my remarks to the software side of the ledger. There are also some very difficult hardware issues. The M/A-Com VideoCipher II is developing as a *de facto* industry standard. This may or may not be appropriate, I am not certain. I understand that the retail price for these de-scramblers has remained at $395 and that only one or two companies have been able to license the equipment, because the terms of the proposed license are very high. I believe that those who take the risk should be rewarded, but I also think, there are important public benefits to be dervied by opening up the manufacturing of this equipment to other companies. I have seen tremendous consumer benefits occur with other technologies, for example, in the VCR industry. Many companies are building units with the same format and as a result, prices have dropped. In the computer industry, many different companies build equipment which is compatible with the equipment of other companies. I think this is important area, and one that the Subcommittee should look at very closely.

We are now at a threshhold in the development of communication services to the home. For the first time in the history of our country, or any country, for that matter, consumers in rural areas are able to access the same types of information and entertainment programming services as those in urban areas. Continued access at reasonable rates, terms, and charges will be a critical communications issue for the remainder of this century and into the next.

I would be confident of the ultimate outcome in this area if I saw a free and open marketplace either existing or likely to develop in the immediate future. I do not see that marketplace developing. I see ~~an~~ established technology attempting to ensure its future by controlling a newer technology and that troubles me. I see inflated prices to the consumer, particularly to the rural consumer, resulting from lack of competition. I see great frustration from all parts of my state and around the country at the policies and practices of some of the nation's largest communication companies. On the part of some of the nation's largest cable TV companies, I see smugness rather than consumer service. I see small independent businessmen from all over my state and the nation struggling to survive against a media blitz of misinformation unfairly denegating their product.

I have followed this industry for the past several years, and I have waited for a fair marketplace to develop. It hasn't and it won't, unless we act. For this reason, I introduced the Satellite Television Open Market Act of 1986.

The **Chairman**. Are there further opening statements? Senator Ford?

OPENING STATEMENT BY SENATOR FORD

Senator **Ford** Mr. Chairman, let me add my thanks to you for calling the hearings today and agreeing to chair. This is a very important issue in my State. It is important because we have over 30,000 families in Kentucky who own satellite dishes.

It is also important to other families throughout the country who will never be wired for cable, and their only resource for television program diversity is to purchase a satellite dish. HBO began scrambling on January 15, 1986. Seven months into scrambling, there is still no national program package available for TVRO owners to subscribe to at competitive prices.

No third party has been successful in negotiating a package with cable programmers. TVRO owners are willing to pay for cable programs. The purpose of this hearing is not to suggest that our TVRO owners should receive free programming. The issue is how much will rural citizens—and I underscore rural—have to pay for cable programs, and if they will have to pay their subscription fees to the same company that is a part of the cable industry.

It was the cable industry which made the decision not to serve the rural TVRO owner, and I could understand that. They said it was uneconomical. There is a desperate need for a program package offered by independent providers. I understand why cable companies expect to be the only provider of cable programming in franchised areas. But what I do not understand is why they seek to be the only retail agents in rural areas.

I do not believe that providing cable programming packages should be reserved to just the cable industry and it is certainly not the marketplace at work, when the only alternative for a TVRO owner is to deal only with the cable industry.

The backyard satellite dish is a technological phenomenon of this decade. Many parts of my State have never been able to receive television—maybe one channel. If you now drive through these parts of Kentucky, the countryside is full of TVRO's, because I believe in serving this rural market who simply wants to pay their fair share.

I was pleased to join with my colleague from Arkansas, Senator Bumpers, in introducing the legislation. And I leave the explanation of our legislation to the distinguished Senator and I look forward to his testimony.

Mr. Chairman, one little aside to the cable question. This week I called C-SPAN to determine how Kentuckians are able to view the Senate proceedings, since I was one of the floor managers of the resolution which provides for permanent televising of the Senate. I was curious as to the number of cable systems in Kentucky which are carrying C-SPAN II.

I was very surprised at the number, and it seems that only TVRO owners are the only Kentuckians presently viewing the Senate.

Lay that on you. Four systems in the State now, four systems, how great it was—they were pounding their chest and open up the galleries and expand it—four systems in the State carry C-SPAN II. Out of 214 cable systems in the State, only 80 partially carry C-SPAN I. I hope that this situation will soon improve.

I realize that many systems in Kentucky are still 12-channel capacity systems, but if any of these systems upgrade their equipment, I sure hope they will consider adding C-SPAN I and II. And to those 134 systems not carrying C-SPAN I, I wish they would take a look at their capacity and consider giving Kentuckians the opportunity to see their Congress at work.

Mr. Chairman, I bring that point because we have heard so much on how many people will be viewing the Senate, and I know your personal feeling as it relates to television in the Senate.

The **Chairman**. Too many.

Senator **Ford**. Too many. I understand. But I wanted to make that a part of the record so we would understand and I imagine you would find the same situation basically in other States as to how great this system is and how many viewers we are reaching at a pretty good expense to the U.S. Senate and to the taxpayers, about $4 million.

The **Chairman**. Senator Gorton.

OPENING STATEMENT BY SENATOR GORTON

Senator **Gorton**. Mr. Chairman, I want to thank you for calling this hearing on such an important issue.

As you and all of the other members of the committee are well aware, satellite dishes have been a source of not only great pleasure, but of education and information to more than 1½ million people who have purchased them.

They have opened doors to a vast panorama of programming which was previously inaccessible in many rural areas. I think it is fair to say that all of the members of the committee want to assure that our constituents in rural areas, as well as dish owners in other areas, continue to have access to the new world that the dish technology has opened up to them.

At the same time, it is important for us to recognize that the signals viewed by dish owners do not just drop from the sky. Quite to the contrary; they are the result of an incredible investment of time, money and technical and creative talent.

Whether a programmer purchases the right to air other people's work or produces its own, it must be able to recover its costs by charging a fee to those who watch the programs. I am convinced that most dish owners share this view. Their chief concern, and ours as well, should be whether the programming should be made available to them in package form at reasonable rates through a distribution network of sufficient diversity to assure true competition.

It is clear that there is a serious question about whether such competition exists today or is likely to come to pass without some action on our part.

Senator Gore has spoken particularly eloquently on just that issue.

Our goal today should be to see how far the industry has come toward achieving that goal, how far it still has to go, and emphasize our commitment to solving the problem both promptly and fairly.

Again, I thank the chairman for calling this hearing and look forward to the education we will receive from the people who are to testify here today.

The CHAIRMAN. Any further comments?

[No response.]

The CHAIRMAN. We are delighted to have Senator Bumpers with us this morning.

Senator.

STATEMENT OF HON. DALE BUMPERS, U.S. SENATOR FROM ARKANSAS

Senator BUMPERS. Mr. Chairman, let me first say you can always tell by the number of television lights and a standing room only crowd how much money is involved in an issue. We are talking about megabucks here, and obviously it attracts a lot of attention.

I have listened with a great deal of interest to all the opening statements and not one single thing has been said yet here this morning that I could disagree with. I especially appreciate Senator Gore's very strong feelings about this. Senator Ford and I and Senator Gore and Senator Cochran have felt rather lonely at times because of the lethargy of the Senate on what I think is really a critical issue, especially to rural America.

And what has been going on is plain antirural. The legislation that has been introduced by Senator Ford and me is not a panacea. We recognize that we cannot dictate all of the terms of the marketplace under which we would like for our rural constituents to receive these signals, but we think that this legislation pushes this problem to the front burner in a way that it will be resolved, and resolved rather shortly.

Mr. Chairman, at this point I ask unanimous consent that my formal statement be inserted in the record, and if I may, I will just extemporize and discuss informally some of my own feelings, plus what our legislation does.

The CHAIRMAN. Without objection.

Senator **Bumpers**. One, it should be pointed out that I have a parochial interest in this because of the 50 biggest manufacturers of dishes in the country, Arkansas had 13, and I use the past tense. We had an estimated 2,400 employees engaged in this business a year ago. Today we have 200 left.

I could give you story after story of young people who manufactured satellite dishes. One in particular had 28 employees a year ago and now has 3, and will almost certainly be out of business within another 6 months unless some relief is provided.

There 1,500,000 dishes in operation in the country, and about 1.1 million of those are in the rural areas; 400,000 are in towns, many of which are served by the cable companies. Dish sales in September 1985 were running at 90,000 per month. This past month there were 18,000 dishes sold. Incidentally, to give you some idea of the magnitude of the problem—which in my opinion is chiefly related to cost—Viacom was in my office yesterday afternoon. They have a movie channel, and I was discussing with them how they serve the rural areas.

It works like this. They have an 800 number, and if you want their movie channel you can dial that 800 number, and that puts you in touch with a computer operation in Omaha. And they ask you what is the identification number on your decoder. You give them the identification number and within 60 seconds, through a computer mechanism, they will activate your decoder to receive that particular movie channel.

In addition to that, they do not bill those people until 30 days after the decoder has been activated. That is just a little risk they take with the customer, which I think is rather magnanimous, but it certainly doesn't solve the problem here.

But the point I want to make is, they have been offering this service to rural America ever since they started scrambling. They now have 15,000 customers out of 1,500,000 dishes in the country.

As Senator Gore has already appropriately pointed out, you can talk about the marketplace all you want to, but obviously when a movie channel has 15,000 customers out of 1½ million at roughly $19.95 a month, something is seriously amiss.

I think there are perfectly understandable and valid reasons for that. One, and the principal one, is the cost which has already been talked about here a great deal. But let me just reiterate it for the benefit of the record on my part. The rural dish owner, first of all, has to plunk down somewhere between $1,500 and some as high as $10,000 for a dish, depending on how sophisticated a system he wants.

Then after making that monumental investment which his city cousins do not have to make, then he must plunk down $395 for a decoder, and under existing law he has not assurance that that decoder will be the only one he will ever have to buy.

There is a good possibility, for example, there will be other decoders. Maybe a decoder company and a programmer will get a simpatico signal and it will be quite different from what HBO and the others are using now. Incidentally, our legislation addresses that, so that there will only be one decoder according to standards set up with the FCC.

But can you imagine being a rural dish owner out there who has just made a $2,000 to $5,000 investment. Suddenly he finds everything you bought the dish for being scrambled and then being told, look, just dial this number and you can get this channel for $10.95, even though promotional spots advertise, for example in the city of Little Rock, that you could get the same channel for $5 if you were a cable customer.

But by the time you call all the 800 numbers to get all the signals your city cousins are getting under the cable franchise, you are also going to be writing 10 to 20 checks a month to all the different people with whom you have had to deal on an individual basis.

Now, these people are not asking for favors. I have never received one letter asking for free television, and believe you me I have received thousands on this. Senator Ford, it really is interesting that Kentucky has precisely the same number of dishes we have in Arkansas, 30,000. And I think I have heard from all 30,000 of them.

Senator **Ford**. I asked mine to write you, too.

Senator **Bumpers**. Maybe it is more than 30,000.

But the point I want to make is that these people are not asking for a free signal. They are simply saying, give us the same break. After all, we are having to invest more on the front end than the people in the city are likely to have to pay for cable over the next 10 years. So they have made that investment. It will probably average $3,000 per customer in this country of those 1.5 million dishes.

They have made that staggering investment and all they are saying is, treat us fairly. Treat us as fairly as the folks in the city and give us the signal at the same cost.

Right now, according to our figures, considering their investment and everything, their costs run almost $100 a month for what people in the city who happen to be fortunate enough to be on a franchise cable system get for $35 a month.

Now, that is a situation that every Senator ought to be concerned with, but those Senators who have a large rural constituency ought to be on the floor of the Senate every day talking about it.

Our bill, S. 2666, is a fairly simple and straightforward bill. Senator Gore, I want to point out now that Mark Fowler, the Chairman of the FCC, was in my office for an hour yesterday afternoon. He told me that today they would announce their Notice of Inquiry, and he promised me faithfully that they would complete it by the end of the year.

He further told me that the requirements of our bill which would tell them what the notice of inquiry must determine, that they would not only do that, but do some other things as well.

Our bill says to the FCC, under your Notice of Inquiry, tell us, No. 1, the availability of scrambled programming at competitive prices; what is the situation?

Two, the extent of or lack of competition among the distributors of such programming, to include the independent distribution of package programming.

Three, comparisons of prices for dishowners and cable subscribers.

Four, the feasibility of making network broadcast signals available in an unserved area, and that is a separate very knotty problem, Mr. Chairman.

And, finally, the protection of backhaul feeds which the networks feel—and legitimately—very strongly about.

Incidentally, there are two other things in the bill that I want to mention. That is, that the FCC will set uniform standards for decoders to address the problem I mentioned a moment ago. That is, that we not wind up with a half a dozen decoders compounding the problem by making the dish owner buy a whole host of decoders to accommodate a scramble signal from different programmers.

Incidentally, M/A-Com is now being sued by a Canadian company for infringement of their patent and they say that M/A-Com has stolen their technology. If that lawsuit, which is the District Court in Virginia is successful, then we are back to square 1.

Then we have M/A-Com which so far has manufactured 250,000 decoders and has sold 25,000. So you can see nobody is benefiting from this. The programmers are not. The manufacturers of the decoding equipment are not. And certainly the manufacturers of dishes are almost extinct.

Finally, we say to the Justice Department, complete your investigation within 6 weeks from the passage of this bill and tell us are there anticompetitive practices at work here.

We want competition. We want the marketplace to decide. But we do not want it to work in an illegal way, in violation of the Robinson-Patman Act or in violation of our antitrust laws. Some of these programs are very anxious to retain this retail business for themselves. If HBO, for example, can sell their two movie channels for $19.95 on an individual basis, that beats selling that same signal to a cable franchisee for $8, $9 a month.

I do not have any quarrel with them doing that as long as nobody else wants to do it. But what we feel is the solution is for the programmer to be required to sell his signal to any group who comes to them with the same kind of a deal that any city cable franchise comes to them with.

If the National Rural Electric Cooperative Association [NRECA]—and I use them only for illustrative purposes—goes to HBO and says in the State of Arkansas, we will assure you of 30,000 customers if they say we want to sign a contract with you and we would like to pay you the same thing you charge Storer Cable in Little Rock, AR, for your signals, they should not be allowed to refuse that.

I might make one other point. It might be that somebody such as the NRECA could sell this signal to rural dish owners for less. In my apartment in Little Rock the other day, they came by to hook up cable. There was some fee. The guy comes in, takes a cable, screws it in the wall, and you pay him for it.

Now, in the situation here, the service charge ought to be a lot less because there are no lines to maintain, and there is nobody going to your house to hook it up. It is going to be done electronically from some place such as Omaha, NE. So the service cost should be a great deal less for serving these areas. The programmer should sell that signal to any group who wants to put together a package deal for the same price they sell to city cable franchises.

It may be that these people will get a signal for less than their city cousins are paying simply because the service cost is so much less.

Well, Mr. Chairman, I have tried to describe as best I could our bill, and I want to say that the network scrambling is a knotty problem. I recognize that the networks have a slightly different situation. They do not want people stealing their signal on backhauls where there is no advertising.

The affiliates of the networks obviously depend totally on advertising, as does the network. And when people can take this signal from the evening news, with limited advertising, or they can take it where there is a backhaul from San Francisco to New York with no advertising on it, they have a right to be upset.

But I want to refer to one of the most articulate letters I have ever received since I have been in the Senate, from Diane Davis, St. Joe, AR. Until the dish came into being, the people in her area got no television. No channel could reach down in the valleys of those mountains where Diane Davis lives.

She makes one of the most compelling arguments for why networks either ought not to be allowed to scramble or ought to take into consideration the roughly 400,000 Diane Davises in America who cannot get any kind of a signal unless there is some kind of a translator or something put in the mountains around them. That is a very knotty problem and I confess to you I don't have an answer. I hope that public broadcasting is never scrambled. I am a great champion, as is Senator Hollings, of public broadcasting. I think that we don't fund them enough. It is about the only thing I watch anymore, but, unhappily, there are only about 3 percent of the people watching. I assume that they never intend to scramble, and certainly I would feel very strongly about it if they tried.

I thank you very much, Mr. Chairman. I would be glad to answer any questions you may have.

The CHAIRMAN. Thank you very much, Senator Bumpers.

Any questions for Senator Bumpers?

[No response.]

The CHAIRMAN. Senator, thank you for your testimony.

Senator BUMPERS. Thank you very much.

[The statement follows:]

STATEMENT OF HON. DALE BUMPERS, U.S. SENATOR FROM ARKANSAS

Mr. Chairman, I thank the Committee for taking the time this morning to hold a hearing on the knotty problems surrounding scrambled satellite television signals. This is a very important issue to rural America. It is an important issue to the many rural satellite antenna owners who otherwise would not have the benefit of specialized programming that those in city areas have long taken for granted.

Consumers are more confused on this issue than any other commerce issue I have dealt with during my tenure in the Senate. We need to clear the air about scrambling. We need to get full competition in the marketplace. Satellite dish owners need an assurance that they are getting a fair deal. I hope that this hearing will be a step toward accomplishing full competition in this marketplace.

At present, Mr. Chairman, the conditions of the marketplace for scrambled programming are not competitive, and, as I have said on the Senate floor, they are down right anti-rural. I will outline the costs a rural citizen will incur in obtaining premium programming, programming that anyone on a cable system can get for much less. If packaged programming by independent distributors were available, the overall costs would quickly adjust to a fairer deal for dish owners.

The legislative history of this issue is clear and simple. Section 705 of the Communications Act, as amended by the Cable Communications Policy Act of 1984, reaffirmed the rights of programmers to scramble. But with respect to signals that are not encrypted the Act gave dish owners the right with some exceptions to view such signals. In this respect, it was a milestone for dish owners. The legislative history stated that a marketing scheme was to be developed for unencrypted programming. But the question of unencrypted programming no longer seems to be important. What is important, and what we are here to talk about, is encrypted or scrambled programming. The legislation Senator Ford and I introduced is designed to amend that law to bring it up-to-date with respect to encrypted programming.

Before I embark on the cost for programming, let me make one point crystal clear. Rural dish owners are not asking something for nothing. They are perfectly willing to pay for scrambled signals. They are willing to accept scrambling as a legitimate way for programmers to protect their signals. They will not, however, accept terms that are not similar to those in urban areas, nor should they.

At present, the cost to rural residents to view premium programming remains significantly higher than their city cousins. First is a $2,000 to $3,000 outlay for a satellite dish. Next comes $395 for a decoder, which every expert I have talked to agrees should sell for around $125-175. Then, one must pay monthly for the programming. Programming sales heretofore have been a la carte, that is, the dish owner goes to each programmer for a subscription to that particular signal. They are on average $10 to $15 apiece for each program.

If a rural dish owner wanted to get several basic subscription services—such as one movie program, one news, weather, and information program, one sports program, one or two superstations, and a children's channel—the costs would add up like buying soda pop at 50 cents a shot rather than buying a case. Assuming that most consumers will finance the purchase of their dish, the cost of programming and the hardware needed to watch it can add up to as much as $95 dollars a month for the first four years of ownership.

Mr. Chairman, the lack of a clear assurance that programming will be made available to dish owners at fully competitive prices has devastated the satellite dish industry. In my state alone, well over half of the dish dealers have gone out of business. Dish sales have declined 80% from a nationwide peak of 90,000 per month in September, 1985, to a mere 18,000 last month. In the manufacturing sector, we lost close to 2,200 jobs in Arkansas in the last year. Thirteen of the fifty largest dish manufacturers can be found in Arkansas. These are people who have lost their jobs because of a disruption in the market, a disruption that simply must come to an end before all the manufacturers in Arkansas are forced to close their doors.

Let me cite one particular example. Art Davis, an innovative young entrepreneur in Jacksonville is hanging on by a thread. I have talked with Art at length on this issue, and I wanted him to have the opportunity to tell his story. Because he cannot be here, I will tell it for him.

Art began in the dish manufacturing business four years ago with a firm called Satellite Base Manufacturing, Inc. He was an enterprising young man who with his brother George designed and built the equipment for the manufacture of satellite dishes himself. Over the last year, Art has gone from 28 employees to only 3 today. By the time the market for scrambling is worked out, Art and many others like him in Arkansas will have been squeezed out of the business.

Is that the kind of death small business innovators in the U.S. are expected to face? I think not. In a fully competitive market by virtue of his ingenuity, Art would strive and prosper. But he cannot wait. Those who he has laid off cannot wait. Mr. Chairman, we need to get this problem behind us so that Art and his employees, along with the hundreds of others employed in the industry in Arkansas, can get back to their jobs and their lives.

Last week, Senator Ford and I introduced legislation in the Senate, S. 2666, the Comprehensive Satellite Dish Owners Fairness Act. This legislation will provide the assurances that dish owners desperately need. The bill is carefully crafted to put the burden on the FCC to ensure that packaged programming will be offered to dish owners under fully competitive conditions.

The bill has three major sections. The first requires the Federal Communications Commission (FCC) to initiate a Notice of Inquiry (NOI) on August 7 to deal with questions regarding fair prices for scrambled programming under fully competitive conditions. The Notice of Inquiry is to address the fundamental issues of competitiveness in the marketplace with a view toward ensuring that packaged programming is made available to dish owners.

Specifically, it requires the FCC to consider the availability of scrambled programming at competitive prices, the extent to competition among the distributors of such programming to include the independent distribution of packaged programming, comparisons of prices for dish owners and cable subscribers, the feasibility of making network broadcast signals available in unserved areas, and the protection of backhaul feeds.

I am pleased to announce today that the FCC has agreed to initiate a Notice of Inquiry and will take an active role in monitoring the marketplace. I met with Chairman Fowler yesterday and he assured me that the FCC investigation would cover the points I just mentioned. He also told me that the NOI would be completed by the end of this year. Two of these issues, the questions of independently distributed packaged programming and network broadcasts, will be discussed more in depth later in my testimony. But I want to state that I am pleased the FCC has, as a result of this legislation, agreed to begin a Notice of Inquiry. I would encourage all parties involved in this issue, many of whom are here today, to actively participate in the FCC proceeding.

The bill's second provision deals with hardware issues. It would require the FCC to set uniform standards for decoders to ensure that consumers will need only one decoder for all encrypted programming that is to be made available. It would further disallow scrambling if decoders are not available. I know that there are those who will argue that the M/A COM Videocipher II unit is the industry wide standard and that such legislation is not needed. But to provide assurances to dish owners that additional decoders will not be needed, I believe this proposal is a sound one. There is nothing in the bill that says the FCC cannot choose standards with which the M/A COM decoder complies.

However, Oak Communications, a firm that supplies Canadian cable operators with scrambling equipment, has filed suit against M/A COM in U.S. District Court for the Eastern District of Virginia. The suit alleges patent infringement. Oak is asking the court that M/A COM "be preliminarily and permanently enjoined from infringing the patents." While I am certainly in no position to express an opinion on the Oak litigation, I am concerned about the outcome. If the court rules in Oak's favor and stays the sale of M/A COM's decoder, we are back to square one on this issue. If no standards are set, and no decoders are available, all scrambling bets should be off. Our legislation would provide for that.

The third provision simply requires the Justice Department to report to Congress within six weeks of enactment of the bill on its ongoing investigation of the antitrust implications of the present marketing structure for scrambled programming. This report is long overdue, and we simply want to know if our antitrust laws are being enforced.

I mentioned I would return to the packaged programming and network feed issues. If truly competitive conditions are to be established in the marketplace, someone other than the program providers and the cable companies should be involved in the marketing of scrambled programs. The House Energy and Commerce Committee Subcommittee on Communications held two days of hearings on this issue. The need to establish independent programming was the overwhelming conclusion of these hearings. I know that some cable Multiple System Operators (MSOs) have put together packages. That is well and good. But these operators sell only within their franchise areas, or at best to the county line. This leaves many unserved areas of the country, especially rural areas.

There have been several proposals to market programs in areas beyond the bounds of a cable system, and I think they have great merit. Tom Burke, a dish dealer from my state, has made offers to programmers to sell package deals to dish owners. He will be outlining his proposal later in these hearings. The National Rural Electric Cooperative Association has put together a plan for marketing programming. They are planning to work in conjunction with the telephone cooperatives to serve rural areas. It is clear that a fully competitive system must develop to give consumers the best price and quality of service available. I believe the programmers should being good faith negotiations for distribution with these and other independent distributors.

Another sticky point that should be addressed is the question of the viewing of network feeds. I have talked about this issue on the Senate floor, and I remained very concerned about ensuring access to broadcast programming to rural areas. There are those in my state who cannot get affiliate signals. For the past five years, they have been able to watch the network-to-affiliate signal. By all means I agree with the networks that these signals are private and should be protected. But we simply must work out a way for the affiliates to expand their coverage to those areas which are not presently served. The FCC Notice of Inquiry is to address this problem.

Some, such as CBS, have suggested translator services to carry the affiliate broadcast to remote areas. Some dish owners suggest that scrambled network feed signals should be made available in areas not served by affiliate signals. I would like to place in the hearing record a copy of letter and testimony I received from Diane Davis of St. Joe, Arkansas, on this issue. I would have liked for her to testify as well. Diane has been especially committed to seeing that network programming is made available to all those who wish to receive it. I hope that the Committee will review Diane's testimony thoroughly.

Diane's point is that because of the expense of translators, many affiliates cannot afford to extend their signals to remote areas. She states very eloquently that she understands and appreciates the position of the affiliates, but believes that some arrangement to get the network's programming to her home is necessary. I especially urge the FCC to review her testimony and address her concerns in the NOI.

Mr. Chairman, once again let me thank the Committee for holding these hearings. I hope that the Committee will respond to this problem through vigorous oversight of the FCC investigation. As the Committee reviews this issue, I hope that they will agree that the legislation Senator Ford and I have introduced is an appropriate response to this very complex issue. Let's get the experts involved, get a competitive market in place, and get these problems behind us. I hope that the Committee will closely review and act on this legislation expeditiously.

The CHAIRMAN. Next we have the Honorable Alfred C. Sikes, Assistant Secretary of Commerce.

STATEMENT OF ALFRED C. SIKES, ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. SIKES. Thank you, Mr. Chairman and members of the committee. I appreciate the opportunity to comment on what are clearly important public policy questions raised by the scrambling of the broadcast and cable television signals relayed by domestic satellite systems.

At the present time, we have 1.5 million receive-only satellite Earth stations in the United States, and they represent a public investment of about $4.5 billion. It has been estimated that about one-third of these satellite dishes are located in urban and suburban areas where conventional cable television service is generally available.

Most of these facilities, however, are found in rural America where they obviously constitute an important and highly valued source of news, information, and entertainment for many people whose viewing choices otherwise would be quite limited.

Estimates are that about 70 satellite signals can be picked up by most dishowners and about 50 of those signals represent video programming. The video programming ranges from network television signals to specialized cable network feeds, including those for Cable News Network, the Christian Broadcast Network, HBO, Showtime, and other services.

Beginning in January of this year, some of these satellite signals have been encrypted or scrambled. Current forecasts call for about 20 of the signals to be scrambled by the end of the year, and some experts maintain that a majority of the signals will be scrambled by the end of this decade.

With scrambling, we are also seeing the beginnings of what might be called the packaging industry; namely, companies which supply dishowners with the technical means to continue to watch, for a price, the signals they were previously able to intercept and watch free.

There are not any hard figures now available on the scope of these packaging operations. This is understandable, since scrambling just started. There have been some uncertainties about how extensive it is going to be, and none of the businesses involved are pervasively regulated in the traditional sense, so they do not file detailed information on a regular basis with the Government.

What we do know, however, is that Home Box Office, a leading pay cable system, has set up its own packaging operation and it is now marketing its signals to satellite dishowners, both directly and through cable television systems.

TCI, the largest cable television company, has announced that it will sell a package of viewing rights to dishowners in or near its franchise areas.

Other organizations, such as some of the rural electric and telephone cooperatives, have also indicated that they might be interested in getting into the satellite signal packaging business.

The basic question that this committee has to address is whether there is any good reason to conclude at this stage that a competitive satellite signal packaging industry will not develop. We at the National Telecommunications and Information Administration see no present basis for such a conclusion.

We began our examination of the scrambling controversy with the assumption that competitive markets will usually bring together supply and demand. That, of course, is one of the basic assumptions that underpins our free enterprise system.

We have, on the one hand, a number of companies that now compete in supplying programming and which could clearly supply it to the satellite dishowners as well. On the other hand, you obviously have a large number of people who have made a significant capital outlay and who clearly want to continue to benefit from that investment. We appear to have the basic ingredients for a competitive, reasonably efficient packaging industry.

Again, at present we see no reason why this should not develop. Certainly problems, however, might exist. But before anyone concludes that Government action is necessary, we should have further detailed information.

Fortunately, these matters are being addressed. As Senator Bumpers indicated, the Department of Justice is currently investigating whether there have been actions in restraint of trade. As a result of House hearings a little over a month ago, the NTIA and FCC agreed to jointly conduct a study, and again Senator Bumpers referred in some detail to that.

I do not want to leave the committee with the impression that I am in any way unsympathetic with the Congress or with the concerns that have been expressed by a number of people.

I have traveled the backroads of Missouri. I have traveled, I should say to Senator Bumpers, the backroads of Arkansas, and I have seen the importance that people place in the video bounty. I have watched farmers build literally to the sky when they had to build the antenna systems, attempting to bring in the fringe signals. And I have certainly seen a sprouting of the dishes across the countryside.

So I am extremely sympathetic with the plight of the rural TVRO owner. More than three-quarters of the American public now lives in the metropolitan statistical areas. Nearly 80 percent of the public currently has access to five or more channels of broadcast television over the air for free. About half of our 87 million households now subscribe to cable television.

In Washington, most people can pick up the nine Washington area television stations and many can pick up at least four of the Baltimore stations as well. We obviously have a full measure of the video bounty that many other Americans enjoy. Some in Washington, however, may not fully relate to the situation facing a significant number of rural Americans, those who for so long have had considerably fewer viewing options.

Based on the information that we have developed, we see no good reason to assume that those in rural America who now, through satellite technology are sharing in that video bounty, will not be able to continue to do so. This, together with our general belief that marketplace solutions usually work more efficiently to the benefit of the public, persuades us that there is no present reason for Congress to intervene.

Let me assure the committee, however, that if following the factual inquiry that NTIA and the FCC are involved with, we conclude that there is some significant chance of market failure and that a reasonable complement of satellite or other viewing options will not be available to rural Americans, we will not hesitate to recommend appropriate solutions.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Secretary, thank you.

Is this primarily a rural problem? Is that how you see it? That is, the people who have the dishes, are they basically people who are in inaccessible parts of the country, who have no other way to get television service?

Mr. SIKES. That is certainly my point of view. Thirty percent of these dishes are in areas that are probably served by cable television. Five percent, I am told, of the people who own dishes actually have cable television service, so they have decided to add another layer.

But from my point of view, this problem is basically a rural problem, where people who have been so long denied the video bounty and then all of a sudden got it now are threatened with losing it.

The CHAIRMAN. They can't call up a cable service and say I am willing to pay to be connected to the cable, where do I send the check?

Mr. SIKES. Precisely.

The CHAIRMAN. Is there some way of tailoring a response so that it meets the needs of the rural people who cannot hook up to a cable, but does not deprive the networks or HBO or whomever of their basic business?

Mr. SIKES. I think a response is being fashioned literally as these hearings are going on. I believe that there is a high likelihood that there is going to be a packager that will make these kinds of services available to the rural parts of our country. And, as Senator Bumpers indicated, the technology is certainly there for this to occur.

It is a little bit like ordering a magazine and the people who take the order send the address of who is to receive the magazine to circulation and then that person receives the magazine. So, I think that we are going to rather rapidly see this kind of a market solution evolve. I know the rural electric cooperatives—I think former Secretary Bergland is going to appear before this committee—are anxious to be a participant in that market, and I would certainly hope that the REA or others—I don't want to preclude others—you know, maybe Sears; it certainly has a massive rural presence.

The CHAIRMAN. That would be sometime down the road. How about somebody in Mountain Grove, MO who bought a satellite dish and spent $1,500?

Mr. SIKES. Approximately today, might have spent more.

The CHAIRMAN. That is a lot of money. They have the thing installed, and all of a sudden they turn it on and they can't get anything.

Do we just say well, wait a few years and somebody will fill this void?

Mr. SIKES. Well, first of all, they can get an awful lot right now. There is still a great amount of that video bounty that I have referred to that is available, that is not scrambled. And, frankly, that is one of the problems with the marketplace developing.

I think that, generally speaking, until there are more signals scrambled, there are going to be fewer who are interested in buying the decoders and paying these monthly prices. So, I think we are going to see, because of the fact that by year's end, most of the popular, or let me say many of the popular signals will have been scrambled, I think we will see a rapidly evolving marketplace at that point.

I think the other thing is that to the extent that people who would get into the market see the Government potentially prohibiting scrambling or potentially ordering the FCC to regulate, or potentially declaring a moratorium, they are going to hesitate. They are going to say, we might make a huge investment, get the infrastructure in place, and then suddenly find that the rug is pulled out from under us.

The CHAIRMAN. Senator Gore.

Senator GORE. Thank you, Mr. Chairman. Mr. Sykes, you say you have at the present time no basis for concluding that the marketplace is not going to resolve this situation, and you point to the NRECA proposal as one bit of evidence that a program packaging industry is going to develop and compete.

I would call your attention to a quotation from the head of Showtime's DBS Division saying that the company has "no intentions" of changing its policy of selling only through cable operators or directly. He says, "I don't see what it would gain us."

Of course, they are part of the cable industry; the same with HBO. If you found a high degree of concentration in the programming industry, and if you found that that industry was controlled by the cable industry through cross ownership or direct ownership and that the programmers, as a result, refused to sell to any third-party distributor with an interest in retailing to dishowners, would you still feel there was no present basis for worrying, that competition would not solve the problem?

Mr. SIKES. Well, what I would conclude is that there are clearly potential perverse incentives.

Senator GORE. Potential? Potential only?

Mr. SIKES. Well, I guess perverse incentives can occur without the potential, so that what I guess I am saying to you, Senator, is that there is reason to very actively look and monitor and hold hearings and, in a reasonable period of time, expect the market to evolve or, if not, fashion some sort of Government solution.

Senator GORE. Do you know the percentage of premium movie channels that is controlled by cable corporations?

Mr. SIKES. Well, I am aware——

Senator GORE. Do you happen to know?

Mr. SIKES. I am aware of the fact that there are certainly interlocking interests. I am aware of the fact that Time Inc. owns ATC, for example, and HBO.

Senator GORE. That is not just interlocking. That is wholly owned.

Mr. SIKES. That is right. I did not mean that in the legalistic sense of interlocking. I am aware, of course, that Viacom is a major player in the cable industry and also, of course, has the Showtime programming.

Senator GORE. Do you know what percentage of premium movie channels is made up by those two corporations?

Mr. SIKES. I do not have the exact percentage.

Senator GORE. One hundred percent owned by the cable industry. So you would see perverse incentives, maybe just potential, but you are looking at that.

Now, what conclusion do you draw from the fact that less than 1 percent of this marketplace, dishowners, have been willing to do business on the terms that have been offered? What conclusion do you draw from that, that the marketplace is working?

Mr. SIKES. Well, first of all, there are a lot of video signals that they currently receive that are not scrambled, so it is not as if everything is scrambled or even the majority of popular signals are scrambled. I am convinced that the majority of popular signals will be scrambled as we come 2 years and/or to the first of 1987. I am convinced at that point you are going to see a market solution evolve very rapidly.

Senator GORE. When?

Mr. SIKES. I say in the first to second quarter of 1987.

Senator GORE. Why?

Mr. SIKES. Why? Because there will be, by then, a majority of popular signals scrambled, and then I think there will be a much greater incentive on the part of the dishowner to invest in a decoder.

Senator GORE. To pay up.

Mr. SIKES. Well, decoders are not manufactured free, Senator.

Senator GORE. Well, no, there are two aspects to the problem. One has to do with the cost of the decoders and the structure of that market. The second aspect of the problem has to do with the availability of programs and the effect of scrambling on the availability of programs.

Now, Senators Ford and Bumpers are addressing the descrambler problem, and they are also addressing the other by looking to the FCC and the Justice Department. What I am attempting to do is to address the other aspect of the problem by requiring that programmers set fair standards for distributors or retailers and then require them not to discriminate against a distributor that happens not to be a cable operator.

Now, what do you make of the requirement that cable distributors distributing to dishowners not be allowed to sell to dishowners outside of their franchise area?

Mr. SIKES. Outside of their franchise area?

Senator GORE. Yes.

Mr. SIKES. Well, I think they have been essentially franchised in that area, and I do not see that as an undue contractual bargain.

Senator GORE. So, you think they ought to have a right as an industry to prevent competition between different cable systems?

Mr. SIKES. Well, from my point I would frankly like to see cable competition sanctioned by the Congress. But in its 1984 Cable Act, it precluded the telephone companies, which are the most likely competitive elements in the cable business, from getting into the business.

Senator GORE. I am out of time.

The CHAIRMAN. Senator Ford.

Senator FORD. Senator Exon and I were discussing why we did not have cable in Montgomery County. We might have to get ourselves a dish.

We could split it, maybe.

Mr. Secretary, we have a simple problem, I think, but in a very technical field, one that is almost monopolized, which gives us an additional problem. I am trying to walk through the minefield to find out how we can placate the cable people and the networks.

I understand the networks. I would not want them to rob me of noncommercial signals that you are going in and let the locals plug it in. I think we ought to be very careful about that.

The people I have visited with in their homes who have a satellite dish are basically low-income people because they are rural and in the mountains. You say you understand that. They are finally now receiving a signal. Most of them, I would say, have an average of 36 months to pay it. They could not just walk in and pay $1,500, $1,995 or $2,495. Most of them owe it over a 36-month period.

It is a pretty good payment for a coalminer out of work. Twenty-two percent in Letcher County are unemployed, and most of them are coalminers. I find that my simple problem. They finally are getting television. They are enjoying it, and then all of a sudden after making monthly payments they cannot get it.

You are a policymaker for this administration. You are here as an expert today from your office. How would you recommend to us that we accommodate those on the hills and hollows, Left Branch, Right Branch, Left Beaver, Right Beaver, Flat Rock, Stinking Creek? These are decent, honorable American people who work hard, can their food for the winter, all this. They finally are now getting television and enjoying it, like you and I.

What is your recommendation to us as a policymaker to work that out for that individual up the hollow?

Mr. SIKES. I guess I would begin by saying, Senator, that I really believe that the marketplace will provide a solution for that person, and I believe that the solution will involve a packaging.

If it does not, which is to say if the rural brethren cannot buy something comparable to what the urban or suburban persons can buy it for, then I think you have had a market failure in respect to the people that live in the coal country. I think that the Government then has to take a look at a solution.

Clearly, the FCC could be ordered to get in and regulate and to provide some sort of rate regulation. I mean, there is a host of things that could be done. Again, I think we are going to see a rapidly developing solution, and I think if we do not I am going to be the first one, if you will let me in your office, to recommend some way that we can ameliorate this problem.

Senator FORD. All you have to do is ask, and you can visit with me any time.

How long until you think it will take the marketplace to work before you have a market failure? I think you have a market failure now.

Mr. SIKES. I think if we had quite a few video signals scrambled, and if they had been scrambled for some months, and were the circumstance as presented today, I would agree with you.

Senator FORD. Well, I have never seen the scrambling; however, I am an early riser. I get up about 5:30 a.m. here, and that is 4:30 a.m. on Central time. CNN is scrambling, and then they tell you how you can get it unscrambled. Of course, I am going through cable, and I do not have to do that.

I think you have a marketplace failure today, and you are going to have very, very strong resistance as it relates to any kind of marketplace solution because there is so few in, as my good friend from Tennessee said, 100 percent. So how are you going to do this? That sounds like a monopoly to me.

Mr. SIKES. I think the essence of the bill that you and Senator Bumpers have sponsored is the essence of my position, which is that the Department of Justice should act as rapidly as it can, aimed specifically at the questions raised by Senator Gore and yourself, the restraint of trade questions.

I think the FCC and NTIA should conclude their study and make recommendations to the Congress.

I do think on the third element, the decoder element, that there is essentially by a de facto standard. There is a huge sunk cost, so to speak, in that standard, and so I do not think the remote possibility that there will be separate decoding systems is having any adverse influence on the market.

The CHAIRMAN. Senator Gorton.

Senator GORTON. Mr. Sikes, in one of your answers to Senator Ford, you said that you thought that evidence that the market was working would be the availability of signals to rural dishowners at a cost comparable to that paid by cable owners in cities.

Did you really mean that? Is competition working when someone who has spent $2,000 on a dish still has to pay the same monthly charge as someone who could just call a cable company and be connected? Is that your definition of appropriate competition?

Mr. **Sikes**. I think the people, Senator, who bought the dishes understood that at some point there would be encryption, there would be scrambling, and that when that point arrived, they would have to pay something for what they were receiving.

So they, notwithstanding that distinct possibility, bought the dish and put it in place. Now, if they are to receive and if increasing numbers of dish owners are to receive signals free, then I think it has a perverse effect of working adverse to our national interest, which is to stimulate the creation of intellectual property, the creation of news, information, and entertainment programming.

My view is that they are not unwilling to pay a package price, to pay $15 or $12 or $20, depending on what tier of service they might get.

Senator **Gorton**. That was a wonderful answer, but it was not an answer to the question I asked. The question I asked is based upon the proposition that dish owners, of course, have made a major investment in purchasing that dish. No comparable investment is made by someone in the city who signs up for cable services.

My question was do you regard the problem as fully solved and the competition in the free market as fully working if dish owners 6 or 8 months from now can get signals and must pay precisely or very close to the same monthly price for that service as cable users do? Is that competition at work?

Mr. **Sikes**. Yes, I think that would be competition that works.

Senator **Gorton**. You do not think there is any justification for the proposition that dishowners, based upon their investment probably should be paying somewhat less per month than a cable user does? You do not buy that argument?

Mr. **Sikes**. Well, there are a lot of occurrences where people in the rural areas end up paying more because they live in more remote areas. On the other hand, they enjoy pleasures and benefits that, frankly, many of us who live in urban and suburban areas do not enjoy.

Senator **Gorton**. Well, I do not think Mr. Ford is going to appreciate that argument, and I do not think that my constituents who live in those rural areas are, either.

Senator **Ford**. I just wonder what back roads he travels.

Senator **Gorton**. Let me ask you one other question arising out of something which Senator Danforth requested. You have put all of your emphasis at this point on dishowners in rural areas who are not served cable.

Do you feel totally indifferent to people who have chosen to use dishes in urban areas? Should they have no rights at all? Should the fact that cable is available be sufficient? Should there be no rights or no protections for people who choose to use dishes even though they might be able to get cable?

Mr. **Sikes**. Well, I think first of all that you are seeing a more rapid development because of the presence already in those urban/suburban markets of the packaging service to the urban/suburban dishowner. I feel that they are not in the peril that persons who live in the rural areas are in.

Second, I think that to the extent a person in the suburbs, for example, with a wire running by the house made a decision to buy a dish, he or she was frequently making the decision to get something free. So I do not have the same level of empathy; yet, I think they should be able to buy a package service.

I think that very quickly TCI, as I mentioned in my opening remarks, is providing them the opportunity to buy the service on a package basis. I think we will see that evolve very rapidly.

Senator GORTON. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Inouye.

Senator INOUYE. Thank you very much. I am here to listen to testimony, but if my hearing is correct in listening to my colleagues, there are more dishowners than cable operators or cable programmers. If I know the politics of the United States, there is a great possibility that a move might be made to outlaw scramblers.

Now, at the present time according to testimony presented here, about one-third of the dishowners are in suburban or urban areas, and two-thirds are in the rural areas of the United States.

If scramblers are outlawed and the cloud is taken away from this situation, what would stop most of the hotels now subscribing to cable from putting up their own dish or the apartment that I live in with 400 residences to put up one massive dish? What would be the effect on the industry?

Mr. SIKES. I think it would be detrimental, in fact severely detrimental, because you would essentially then have a serious bypass question. I think you would have a chilling effect on the programmers to create, to produce, to distribute, so I think we would have a lessening of product. This is also important product in our international trade situation.

Then I think, second, you would have a real severe problem for the broadcast affiliates, the local television stations that provide the local news and public affairs programming, because you would likewise have bypass of the local signals with the result that they would have an increasingly diminishing audience and an increasingly diminishing amount of advertising revenue and, therefore, not have the sort of revenue that could feed back into the news and public affairs programming.

Senator INOUYE. Would this be legal under our present laws for my apartment building to put a master dish up?

Mr. SIKES. No; I think it is not.

Senator INOUYE. It is not legal?

Mr. SIKES. No.

[Pause.]

Senator GORE. Would my colleague yield briefly on this?

Senator INOUYE. Sure.

Senator GORE. Under the Cable Communications Act of 1984, it is legal to receive an unscrambled signal for personal use but illegal to receive it and resell it to someone else.

Senator INOUYE. The condominium is not reselling. The co-op is not reselling. The co-op would get together and agree to put up a master dish and split the cost. The same thing with condominiums. Would that be illegal?

Mr. SIKES. It is my understanding that, again, the master dish is not illegal. As Senator Gore indicated, the resale would be, but I cannot answer specifically that question. I will be happy to provide information for the record that would very specifically answer that question, Senator.

[The following information was subsequently received for the record:]

U.S. Department of Commerce, the Assistant Secretary
for Communications and Information,
Washington, DC, August 6, 1986.

Hon. Daniel K. Inouye,
U.S. Senate,
Washington DC.

Dear Senator Inouye: This letter concerns the questions which you and Senator Gore raised regarding "satellite master antenna television" (SMATV) operations during the Senate Commerce Committee's July 31 hearings on satellite cable programming "scrambling."

The answer to your question is complicated because SMATV operations are subject to both the Communications Act and the copyright laws. Section 605 of the Communications Act makes it unlawful to receive and divulge protected communications. There is an exception, however, which permits individual interception or receipt of an unscrambled satellite signal for "private viewing." This exception legitimates individual dish owner interception and use of an unscrambled satellite signal where there is no "marketing system." Such individual interception and use also generally consitutes "fair use," and thus does not trigger copyright liability.

The individual reception exemption from section 605 of the Communications Act, however, may not extend to SMATV operations, regardless of whether they are owned by an apartment, condominium, or cooperative. See 47 USC 605 (c)(4). SMATV operations, moreover, probably cannot avail themselves of the "fair use" exemption under the copyright laws, and thus must obtain permission from the satellite signal originator. As a practical matter, if a SMATV operation secures permission for copyright purposes, its reception of a satellite signal would be lawful under the Communications Act.

Once a satellite signal is scrambled, or a marketing system is established, the individual reception exemption in the Communications Act no longer applies. Scrambled signal reception by an individual dish owner or by a SMATV could thus violate the Communications Act. Scrambling would not affect the copyright liability of the SMATV operation, which would remain subject to copyright regardless.

I trust that this clarification of my initial answer is responsive to your questions. If we can provide further information, however, we would be pleased to do so.

Sincerely,

Alfred C. Sikes.

Senator Inouye. In other words, at the least if scramblers are prohibited, what would result would be utter chaos?

Mr. Sikes. I think it would. I might not go as far as utter chaos, but I think it would be severely detrimental.

Senator Inouye. Thank you very much.

The Chairman. Senator Hollings.

Senator Hollings. Very quickly, because they have an amendment up on the floor to repeal Gramm-Rudman-Hollings and I have to get there. I think, Mr. Secretary, that Senator Gore has put his finger on the difference.

The problem here, as I see it, is the difference between a right to the market and not a right to a program. I have 35,000 or more dishowners that I represent. I have tried to explain to them as best I know how that nobody has just an absolute right to the program, and I think they understand that.

Now, on the other hand, I have the REA who is trying to negotiate for programs, and they do not have a right to the market. The programmers are stonewalling. You are saying: the marketplace will provide a solution and that there will be packages.

Now, here comes the REA. They are ready to package.

Rather than the rapidly developing solution, what I am looking at is a rapidly developed stonewall. They say, look, we are dealing only with cable. They have a viable market. They have hundreds, perhaps thousands that they can serve, and they are going to these program producers, and they will not talk. I think that is the real problem for this committee.

Incidentally, I want to invite you to rural Macomb Street in downtown Washington up by the cathedral.

If you can get nine television stations and four Baltimore, I will jump off the steeple over there where the chairman preaches. I can tell you right now. I have a regular RCA set, and I want to show it to you. I do not have a right to the programs yet.

The CHAIRMAN. Some people have wanted to jump off the steeple when I preach, Senator Hollings, but not because they could or could not get channels.

Senator HOLLINGS. In all candor, these folks have invested, and it is an investment, I think, in the public interest. There it is. It is the rural outreachers that can hear the news, keep up with what is going on and everything else. I think, yes, we have a public interest that they continue to do so.

I think as a Congress we can confine that, but I do not think we can confine that in contrast to just providing a right to the program. They have got to produce. People will ruin a business if it is not commercially viable. They have a right not to the program, a right to the market, and I do not find Commerce suggesting that they do have a right to that market.

You think the market is developing rapidly a solution. On the contrary, it is a rapidly developing stonewall. That is what they are complaining about. They cannot go in and negotiate. They cannot get the program. They will not even talk to them.

Have you experienced that in your investigation of this problem?

Mr. SIKES. The REA, as I understand it, just began its conversations. I was in fact in the House hearings a little over a month ago, and they indicated they were going to begin. I know there are people here on your list of witnesses who are much better able to say whether stonewalling is or is not going on than I am.

We have just begun with the FCC the study that Senators Bumpers and Ford have requested in their bill. That is specifically one of the things we are going to look into. I am in hopes that our study could be concluded by year's end and would quickly come back, assuming any findings of market failure and recommend a solution.

Senator HOLLINGS. Very good, sir. I think that is our problem here for the Commerce Committee, to make certain that we keep the market open because it is a market, and market forces are working. When they try to band together, however, as they have and they find none of the big entities because they own the cable and everything else and they have a monopoly, it is our duty to break up those monopolistic situations and provide that freedom of the market. Then the market, as you characterize it, can quickly provide a solution.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

Mr. Secretary, I welcome you here. Let me see if I can get at this thing from a little bit different perspective, perhaps. We do not have mountains in Nebraska to speak of, but we have an awful lot of people with dishes because they live in rural areas where there is no way that they can now obtain cable services. And while I look forward to the possibility that the REA, which has done a tremendous job in supplying telephones and electricity to rural areas, may eventually provide that kind of service, in the meantime we have a tremendous problem, and I think that is what we are trying to address here.

You say that you hope the marketplace will provide some relief. And I share your hope that that takes place. But since that is not taking place nearly as rapidly as scrambling is moving into the area, would it not be a good idea in your opinion that we have rules, regulations, or laws if necessary to prevent scrambling until the marketplace does catch up so that these dishowners would not be unfairly penalized, which they are about to be or have been in the very recent past?

Mr. SIKES. Senator, I think a moratorium would slow if not completely halt the development of the marketplace solutions, so no, I do not think that would be something that should be done.

Senator EXON. In other words, what you are saying is that then you feel that as painful as that might be, that those people who do own dishes and who have no other way to get television now just will have to suffer until the marketplace catches up?

Mr. SIKES. Well, they get a lot of signals right now.

Senator EXON. Well, I heard you say that, but they do not get all of them, do they?

Mr. SIKES. No, they do not get all of them.

Senator EXON. And is it not likely that the marketplace now unregulated basically is going to more and more scrambling, and are we not likely to see a much higher percentage of the signal scrambled within the next 12 months?

Mr. SIKES. Yes, absolutely.

Senator EXON. Well, what do you suggest we do about that in the meantime, just study it?

Mr. SIKES. I think that a study—I think that the Congress is obviously keenly interested in this matter, and I think that the bringing together of supply and demand will provide the solution.

Senator EXON. Mr. Secretary, what percentage of all TV signals do you anticipate will be scrambled in the next 2 years? Ten percent? Fifty percent? Eighty percent?

Mr. SIKES. My crystal ball goes out about a year, and I think it is going to be over 50 percent.

Senator EXON. All right, then, we have got a problem, have we not?

Mr. SIKES. Certainly, if there is no marketplace solution at that point we would have a problem.

Senator EXON. Well, all that I am saying is, I do not know which comes first, the chicken or the egg, but I think when we are dealing with rural people in the United States, which certainly are an extreme minority of our total population base, that here is a place where government has to step in, if we must step in, and I believe that there is the will, and I believe there is the way that that is going to happen, and I think the signal should be sent, the signal should be sent very clearly to those people who are forcing this through for reasons that I understand, and I know it costs money to produce programming, hiring people, producers, actors, all that goes into making up the programs that these people want.

All I am telling you is, the people in Nebraska do not want anything free. They are willing to pay essentially and maybe even a little bit more than their cousins that live in Omaha or Lincoln for the same service. All I am saying is that I am not sure that those people feel it is fair for them to be deprived, despite the fact that some of them may have known, and some of them did not, but that some of them may have known when they bought that dish that some day along the line they were going to face this problem.

So, I do not believe saying, well, they should have known that and therefore we will let the marketplace prevail, because I am not convinced at this juncture that the marketplace is going to prevail soon enough not to cause some tremendous harm and tremendous problem in those rural areas.

Let me ask you another question. If a year from now we have 50 percent of the signals scrambled, or a year and a half, as your crystal ball says, do you really think that the marketplace by that time is going to come down in price on descramblers enough to where we would be treating our rural folks fairly?

Mr. SIKES. Well, I think that for the near term, and by that I would mean at least 12 months, I would see the scrambler basically being priced at $395, although it is interesting that there is some beginnings of a scrambler leasing market, and I think that it is running in the range of $3 to $6 a month, maybe with $6 being kind of the striking price, and I understand that at the conclusion of so many $6 payments that they will own the scrambler or the descrambler, excuse me.

I think that is one possible way that this decoder cost is going to be spread out. I would say, Senator, back to your earlier statement that the industry people that need to get the signal are all represented in this room today, that I think it is important that they get the signal. I think they are, and I hope that they will take it to heart, and that a marketplace solution, so to speak, will evolve. If it does not, I assure you that I will be working with the Congress to forge some sort of solution.

Senator EXON. My time is up, Mr. Chairman. Just one last point I want to make and then I will conclude, and I hate to impose on the committee, but this is a tremendously important matter in the rural areas of our country. Sometimes I wonder whether or not the powers that be in the broadcasting industry, cable and otherwise, recognize the unfair route that they are pursuing given it has been unfair for people to steal or capture something free.

I realize that maybe we will have a resolution to the problem. It just seems to me, though, that if something is not done very quickly, we are going to probably find ourselves in a situation where we might enact a law that simply says that anyone who lives in an area served by cable, it would be illegal for them to have a dish. If that came to pass, I am just wondering. It would seem to me that a relatively small percentage of the total population of the United States that live in areas that are not served by cable would therefore be in a position to go ahead and use their dishes, and it would be such an insignificant part of the total market that the broadcasters and the cable people might not worry about it.

I mean, I do not think that the number of people in Kentucky, for example, that live in the hills is a high enough percent of the advertising market to be of major concern, as some people seem to think it is. I just simply say that I think there is a real problem here, and I am not sure the marketplace will work, and I am not ready to give it, as one Senator, I am not ready to give that marketplace more than a few months to catch up. Otherwise, I think we will have to step in and do something through the FCC, the Federal Government rules and regulations or statutes.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Secretary, thank you very much for your testimony. I know you have a 10:30 appointment at the State Department. I think you might be a minute or two late. We appreciate your forebearance. Thank you.

Mr. SIKES. Thank you, Mr. Chairman.

The CHAIRMAN. I might say between this witness and the next panel that Senator Kassebaum cannot be here this morning because of a conflicting meeting of the Foreign Relations Committee. She will submit a statement for the record and expects to pose some written questions to the witnesses.

Obviously, a legislative solution this year is improbable, given the fact that the House has not done anything more than hold hearings, and we are getting to the end of this Congress. Unless an amendment is added to some must legislation such as the sports bill, it is very doubtful that this is the year for legislation.

Senator GORE. That is what we call a perverse incentive, Mr. Chairman, but it could be an amendment to the debt limit, I might say.

The CHAIRMAN. But I think that Secretary Sikes has pointed out that if the marketplace does not work, it will become apparent in the first quarter or two of 1987. It seems to me, therefore, for those who are interested in legislation, and there have been a number of bills that have been introduced, that if the administration is interested in working with members of the committee and other Senators, it might be useful to spend the next 6 months in an effort to try to put together some sort of consensus approach to dealing with the problem.

Senator GORE. Will the chairman yield briefly?

The CHAIRMAN. Yes.

Senator GORE. Let me just say that I think 6 months' time would see the virtual destruction of the dish industry, which is just barely hanging on at the present time, and I do not say that for purposes of exaggeration. I genuinely believe it. And what they are asking for after all is not something for nothing. They are asking merely for competition.

The CHAIRMAN. Then let me rephrase my comment. If for any reason it becomes difficult to get legislation passed during this Congress, it would seem to me that it would be well worth everybody's time to be looking at some sort of consensus approach for early next year.

[The following information was subsequently received for the record:]

OPENING STATEMENT BY SENATOR KASSEBAUM

This hearing has been called because of the serious concerns of many people, from television viewers and cable operators to TVRO manufacturers and retailers. Like others on the Committee, I have heard from many of my constituents about this issue.

Since Home Box Office scrambled its signal in January of this year, considerable concern has been expressed by owners of satellite dishes. Other programmers have announced efforts to scramble their satellite signals. In response to this concern, both the Senate and the House of Representatives have been following developments in the industry closely.

Legislation on the scrambling issue has been introduced in both houses as members seek the appropriate balance between the rights and needs of programmers, distributors, and viewers. The legislation has taken varying approaches, with some advocating a moratorium on scrambling and others calling for new governmental regulation of decoding technologies and of program access. Unfortunately, no legislative consensus has developed and discussions among the industry participants have been disappointing.

This is a controversial and complex issue. Dish owners, programmers, and the cable industry have strongly held views on whether legislation is even necessary. Developing a compromise that protects the interests of programmers in the programs they developed and that ensures real competition in the marketing of scrambled signals has been and will be difficult. I do not believe, however, that it is impossible. The results of studies by the Department of Commerce, the Department of Justice, and the Federal Communications Commission will be available early in 1987 to help Congress address this issue in a more thoughtful and comprehensive manner. Although I am not convinced that legislation is necessary, if progress is not made soon on affordable packages of scrambled programming, a legislative remedy may result. Today's hearing will help us determine whether such a remedy is needed and, if so, what form it should take.

The next panel consist of James Mooney, National Cable Television Association; Jack Valenti, Motion Picture Association of America; Taylor Howard, Satellite Television Viewing Rights Coalition; Tom Burke, National Satellite Alliance; and James Bunker, from M/A-Com, Inc.

Mr. Mooney, thank you very much.

STATEMENTS OF JAMES P. MOONEY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL CABLE TELEVISION ASSOCIATION; JACK VALENTI, PRESIDENT, MOTION PICTURE ASSOCIATION OF AMERICA; TAYLOR HOWARD, CHAIRMAN OF THE BOARD OF DIRECTORS, SPACE, MEMBER, SATELLITE TELEVISION VIEWING RIGHTS COALITION, ACCOMPANIED BY RICHARD L. BROWN, COUNSEL; TOM BURKE, FOUNDER AND PRESIDENT, NATIONAL SATELLITE ALLIANCE; AND JAMES F. BUNKER, SENIOR VICE PRESIDENT, CORPORATE MARKETING, M/A-COM, INC.

Mr. MOONEY. Thank you, Mr. Chairman.

We appreciate the opportunity to appear before the committee today. We understand you have a 5-minute rule in effect, and therefore I will summarize my statement.

The issue before the committee today involves the scrambling of satellite cable programming. Cable programming is, of course, pay television. Our customers purchase our programming whether a given service appears on the basic tier or as a stand-alone premium service. And this is true whether programming is created by cable operators locally, as is increasingly happening, or whether it is produced specifically for national distribution on cable systems.

It is the willingness of our customers to pay for this programming that has transformed cable from a technology invented almost 40 years ago merely to retransmit broadcast signals into a fullblown and separate television medium of its own.

There are today approximately 72 satellite cable services being delivered nationwide, and about 11 regional cable services which also are transmitted to cable head ends by satellite. Of these services, the so-called premium services, those which are available to cable subscribers generally as a separate single purchase option, derive virtually all of their revenue from subscriber fees.

However, even the basic services are heavily dependent on cable subscriber fees, although many of them accept advertising as well. In 1985, for example, the 24-hour sports channel, ESPN, derived 30 percent of its revenues from cable subscriber fees for CNN, Arts and Entertainment, and the childrens' channel, Nickelodeon.

The proportion of revenues derived from cable subscriber fees was 48, 68, and 75 percent respectively, and so this dual revenue stream from advertising and subscription fees is typical of all but a few of the satellite cable services. I heard CBN mentioned this morning. It is my understanding that CBN, which has been entirely advertiser supported, is going to also go to a fee at the beginning of the year. In any event, it is this important distinction that allows cable television to develop and provide quality programming that is different from that which is offered by conventional broadcasting.

Broadcasters, of course, get their revenues solely from advertising, and as a result are driven toward the lowest common denominator programming in order to attract as broad an audience as possible, but because cable is pay television, there is less pressure toward the lowest common denominator, and that is how we get the wide variety of services we are able to offer.

A key factor in the development of cable programming is the result of the dramatic change satellite technology has worked in the economics of distribution. Satellite delivery allows programmers to reach most cable operators with a single transmission. It simply is a more economical and efficient means of distribution than the terrestrial land lines and microwave relays we used to use, but which we don't have to use now.

Now, the controversy over scrambling, of course, arises from the fact that over a million households, most of them rural, have purchased their own satellite signal receiving equipment, which is capable of intercepting the delivery of cable programming to cable systems. Now, this is not a phenomenon to which we are opposed. We did not oppose the action of the FCC in 1979 allowing private ownership of backyard dishes. We did not oppose the action of the FCC just a few months ago preempting the authority of the State and local governments to impose zoning restrictions on backyard dishes.

We did not oppose the decision of Congress in 1984 adding an amendment to the Cable Act to make it clear that it is not unlawful per se to use a backyard dish to view unscrambled cable satellite programming, but I would comment Senator Inouye was discussing a few minutes ago the apartment building situation. You need scrambling because you do not have any other way to police whether people are going to pay or not. You can spend all day and all night setting up a system to charge people in the clear programming, but unless you scramble it and move the incentive for the transaction to the recipient, you are never going to get any money.

Mr. Chairman, we think that the record demonstrates that the cable industry and its programming services not only intends to make this programming available to dishowners but that it will do so at a reasonable price. I think that is settled. I think the fact first that we intend to make it available is settled beyond a reasonable doubt.

Second, on the question of whether dishowners will have to buy multiple descrambling to view multiple channels, it now is crystal clear that the M/A-Com technology has become the industry standard, and that a single M/A-Com descrambler unit will handle at least 54 channels. People are not going to have to purchase multiple boxes.

Third, on the availability of descrambler units, M/A-Com has sold 30,000 units, and has 45,000 now more in inventory. Would you give me another minute, Mr. Chairman?

The CHAIRMAN. I will let you wind up.

Mr. MOONEY. Fourth, the M/A-Com consumer authorization service works. Fifth, HBO and Showtime have between them already sold 54,000 pay units to approximately 30,000 households. Sixth, HBO and Showtime clearly are engaged in price competition with each other, and we think that is healthy.

I would conclude, Mr. Chairman, by saying that members of this committee and its counterpart in the House have played a valuable role in helping to nudge this process along. You have, in effect, given the programmers and the cable industry an incentive to get their act together on this, but you also can reach a point where the thing gets so politicized that things will just freeze up. Everybody will be afraid to move. We think that part of the confusion out there arises from the fact that a lot of people are not certain whether Congress is going to allow scrambling to go forward or not, and that may be why we have not sold as many of these decoders as had been expected.

We think that the system is not broke. We think, however, that if you attempt to fix it you might end up breaking it.

[The statement follows:]

STATEMENT OF JAMES P. MOONEY, PRESIDENT, NATIONAL CABLE TELEVISION ASSOCIATION

Mr. Chairman, members of the Committee, my name is James P. Mooney. I am President of the National Cable Television Association.

NCTA is the principal trade association of the cable TV industry and represents over 2,400 cable systems serving more than 75% of the 40 million cable homes in the U.S. We also represent 56 cable programming services who create, package, and provide quality TV programming for cable subscribers.

This is NCTA's first appearance before this Committee since the enactment of S. 66, the Cable Communications Policy Act of 1984. Before turning to the issues at hand this morning, I want to express the cable industry's appreciation for the arduous effort put forward by the members of this Committee in fashioning a national policy for cable. I also want to pay special tribute on behalf of the cable industry to Senator Goldwater, the chief sponsor and architect of S. 66. The Cable Act has meant a great deal to our industry, and in my opinion will prove to be the foundation necessary for cable to reach its full potential as a television medium. The benefits in new programming the public will obtain from cable's growth and stature will flow from the vision and faith placed in our industry by Senator Goldwater and his colleagues on this Committee.

The issue before the Committee today involves the scrambling of satellite cable programming. Cable programming is, of course, pay television. Our customers purchase our programming, whether a given service appears on the basic tier, or as a stand alone premium service; this is true whether programming is created by cable operators locally—as is increasingly happening—or whether it is produced specifically for national distribution on cable systems. It is the willingness of our customers to pay for this programming that has transformed cable from a technology invented almost 40 years ago merely to retransmit broadcast signals into a full-blown and separate television medium of its own.

The subject of this hearing is that segment of cable programming which is created for national distribution over cable and delivered to each system by satellite transmission. There are today approximately 72 satellite cable services being delivered nationwide, and about 11 regional cable services which also are transmitted to cable headends by satellite. Of these services, the so-called "premium services"—those which are available to cable subscribers generally as a separate, single purchase option—derive virtually all of their revenue from subscriber fees. However, even the "basic services" are heavily dependent on cable subscriber fees, though many of them accept advertising as well.

In 1985, for example, the 24-hour sports channel ESPN derived 30% of its revenues from cable subscriber fees. For Cable News Network, Arts and Entertainment, and the children's channel, Nickelodeon, the proportion of revenues derived from cable subscribers was 48%, 68%, and 75%, respectively. This dual revenue stream from advertising and subscription fees is typical of all but a few of the satellite cable services.

It is this important distinction that allows cable television to develop and provide quality programming that is substantially different from that offered by broadcast television. Broadcasters derive revenue solely through advertising, and, as a result, are driven inexorably toward lowest common denominator programming in order to attract as broad an audience as possible. Because cable television *is* pay television, however, there is less pressure toward the lowest common denominator, and more flexibility to provide quality, targeted programming. Indeed, it is only because subscribers are willing to pay a monthly fee for services like Arts and Entertainment, Nickelodeon, and Cable News Network that these services are able to exist at all.

The programming created for and provided by cable as an alternative to broadcast television is so popular today that it is almost taken for granted. Yet only ten years ago, most of these services were nonexistent. Their development was made possible by two key factors.

The first factor was the discovery of what has proved to be a huge public appetite for programming other than that which customarily appears on broadcast network television and reruns of the same. Cable satisfies that appetite, and indeed, cable already has had a positive competitive effect on broadcast programming as well. We note that more and more broadcasters are trying to emulate cable's successful formats, from new UHF stations which seek to copy MTV, to public broadcast stations that have shifted from showing BBC reruns to showing reruns of American-made programs originally made for cable. We also note that according to Brandon Tartikoff, President of NBC Entertainment, competition from cable was a primary factor in NBC's decision to stick with "Hill Street Blues" and similar programming of a higher quality than heretofore seen on the broadcast networks.

The second key factor in the development of cable programming services is the result of the dramatic change satellite technology has worked in the economics of distribution. Satellite delivery allows programmers to reach most cable operators with a single transmission—it simply is a more economical and efficient means of distribution than the terrestrial landlines and microwave relays that were used before. Just as telephony, news wires, and broadcast networks have moved to satellites to satisfy their internal distribution needs, so has the cable industry.

The controversy over scrambling arises, of course, from the fact that over a million households, most of them rural, have purchased their own satellite signal receiving equipment, capable of intercepting the delivery of cable programming to cable systems.

This is not a phenomenon to which the cable industry is opposed. We did not oppose the action of the FCC in 1979 allowing private ownership of backyard dishes. We did not oppose the action of the FCC just a few months ago preempting the authority of state and local governments to impose zoning restrictions on backyard dishes. We did not oppose the decision of Congress in 1984 adding an amendment to the Cable Act to make it clear that it is not unlawful per se to use a backyard dish to view unscrambled satellite cable programming.

The record is beyond question, Mr. Chairman, that the cable industry—operators and programmers alike—have not attempted to employ the regulatory or legislative processes of government to hinder the development of the backyard dish industry. We do not seek to do so now.

We do seek, however, to protect the economic integrity of our product. Moreover, it simply is not fair that one group of consumers—cable customers—should have to pay for a product while another group—satellite dish owners—circumvents the marketplace and gets it for free.

Mr. Chairman, the controversy surrounding scrambling has been so intense that facts have tended to become obscured. In the hope that the warm light of reason may yet have some positive effect on this situation, I offer some facts which, as you will see, bear on the principal points of confusion which have created and prolonged the controversy itself:

First, I think it now is settled beyond a reasonable doubt that cable satellite programmers do in fact intend to market their programming services to backyard dish owners.

Second, on the question of whether dish owners will have to buy multiple descramblers to view multiple channels, it now is crystal-clear that the M/A-Com technology has become the industry standard, and that a single M/A-Com descrambler unit will handle at least 54 channels. Purchase by consumers of multiple descramblers isn't necessary.

Third, on the availability of descrambler units, M/A-Com has sold 30,000 units and has 45,000 more in inventory. Descrambler units are readily available to the consumer from a variety of distributors, and the distributors themselves seem to have no problem getting quick access to the M/A-Com inventory. Should demand for descrambler units pick up, as M/A-Com obviously hopes it will, M/A-Com has a current production capacity of 40,000 units per month. There is, in short, no supply problem for anyone who wants to buy a descrambler.

Fourth, the M/A-Com consumer authorization system, which it has made available to anyone licensed by a programmer to distribute its product, is working and is working well. The cable billing services also have put systems on line to serve the TVRO market.

Fifth, HBO and Showtime, which control four of the six cable programming channels that have scrambled thus far, have between them already sold 54,000 pay units to approximately 30,000 TVRO subscribers. This shows rather clearly the development of a working market for the sale of cable satellite programming to dish owners.

Sixth, there is price competition already extant between HBO and Showtime. HBO and its companion service, Cinemax, initially entered the market at $12.95 each per month, with a discount for dish owners who bought both. Showtime and its own companion service, The Movie Channel, undercut that price when they entered the market at $10.95 each per month, with a similar discount for the purchase of both. In response, HBO and Cinemax last month dropped their prices by almost 17% to $10.79 each per month for an annual subscription, with a correlating drop in the discount rate for the purchase of both. Quite clearly, HBO and Showtime consider themselves to be in competition with each other in the TVRO market and are behaving competitively.

Seventh, CNN and CNN Headline News, which are the only other two cable channels to have scrambled thus far, have concluded nationwide "one-stop shopping" agreements with HBO. We expect a similar agreement with Showtime to be announced soon, and it is expected that other basic cable services will do so as they in turn scramble their signals. Thus nationwide "packaging" arrangements already are coming into being in direct correlation to the amount of scrambling going on.

Eighth, and last, we think it noteworthy, too, that a number of cable operators have themselves taken steps to offer their own packages of cable programming to dish owners located within their cable service areas.

In some instances—TCI comes to mind—the prices being charged for the TVRO packages are less than those being charged to cable subscribers who live in the same place.

Mr. Chairman, a candid appraisal of the scrambling controversy requires some direct mention of the widespread "confusion" we have heard so much about among actual and potential dish owners. As one whose organization has labored long and hard to make available to the Congress, and to the consumer press, what the facts are, I am compelled to state that if there is confusion out there, we didn't cause it. I am prepared to make available to the Committee every piece of paper NCTA has supplied to the Congress over the past year—and every piece of paper we've sent to our national press list of over 600 names—seeking to clear up this persistent confusion. If the Committee also would like access to clip files of dish dealer ads and articles from the dish dealers and dish consumers press, and our audio tapes of Mr. Lamonica's FM America program, we'll make those available, too, and the Committee can draw its own conclusions.

If what everybody's really after here, however, is a reasoned approach to scrambling, and the best results for the television viewing public, both rural and nonrural, I invite the Committee to consider that prolongation of the legislative and political controversy over scrambling does more harm to the emergent dish industry—and therefore to consumer choice—than it does good.

Members of this Committee, and its counterpart in the House, have made a positive contribution to the private market process by nudging the parties along—giving them incentives, as it were to get their acts together. But there is such a thing as prolonging the controversy to a point where the market process freezes up and everybody becomes afraid to move in any direction. We are reaching the point where people aren't going to buy backyard dishes, and will be reluctant to invest in decoders, so long as scrambling legislation is under active consideration. It's quite difficult, too, for programmers and marketers to reach definitive distribution agreements while Congress is considering complex regulatory schemes.

I don't think that's what the Congress wants, nor is it what my industry wants, nor in fact do I think it is what the cooler heads on the dish side want. In closing, therefore, I ask that you look at the facts on descramblers, and look at the progress which has been made in a very short period of time with respect to the establishment of marketing systems for those signals which actually have been scrambled or are likely to be scrambled in the near future.

This is a very new business which has been in existence for only a very short time, but a great deal has already been accomplished as witness the fact, again, that more than 54,000 pay units already have been sold. Congressional oversight, through hearings such as this, is helpful and appropriate. At the same time, we strongly urge the Committee not to pursue solutions where there really isn't any public policy problem. It "ain't broke", and there is a very real possibility that if you try to "fix it" anyway, you may break it and in the process severely hamper the future of pay television as well.

The CHAIRMAN. Mr. Valenti?

Mr. VALENTI. Let me begin by saying, imagine if you can a circular latticework of metal sitting in your back yard that can with langorous ease fetch down about 1,000 television programs every day, including, I might add, the spectacle of the House and the Senate performing "Hamlet." That is really magic.

Programs are magic, too, and like the folks who manufacture the TVRO and the people who own them, we invest in programs, creative energy, money, time, innovation, imagination, and just plain hard work, so that you can construct a story told on film and tape, and then let it be hurled with the speed of light from a transponder so that it can entertain America.

Whatever flies through the air thank goodness TVRO owners have come to the conclusion rightfully that it is not free to everybody if you can intercept it. That was kind of a pathetic fallacy that a lot of people believed in, but I think it has been demonstrated today that TVRO owners want to pay fairly for what they receive.

Now, with that preface in mind, Mr. Chairman, this is what the MPAA supports and advocates. It is a very simple three-point program, and we believe this genuinely, and I say we are the people who create the programs that cable and television stations and TVRO owners use.

One, copyrighted programs ought to be accessible to everyone in this country who wants to receive them. Nobody ought to be denied choice.

No. 2, the marketplace has to be nourished by competition. If you want one key, Senator Ford and Senator Exon, to the solution to this problem, it is that simple word, competition. This arena ought not be dominated by a small band of cable operators. We believe that strenuously.

No. 3, the marketplace pricing just cannot be ordered by somebody else because nobody knows what the price is. We have gone through that kind of a really flimsy game in this town too often. Artificial pricing is wrong.

That is the simple summary of our case. Let me go into just two other points. One, the Congress has already said quite unambiguously that scrambling is legitimate, and a program owner, through whatever distributor he has, ought to have the right to protect the integrity of that which he is offering to the marketplace so the market will work if, one, there is real competition among and between providers of these satellite delivered programs.

It cannot be centralized in the cable industry. I am at work in another forum, contesting with Mr. Mooney and some of his people, about what I think is the dark and menacing threat of concentration of power within the cable industry. You unshackled cable. We did not. The House and the Senate made that decision and what was born was the emancipation of cable, but that emancipation has taken a dark turn because of concentration of power.

There have got to be competitive forces out there. If there is not, then there is nothing you are ever going to do to solve this problem. Finally, the pricing mechanism has got to spring from the marketplace. I promised you it will happen when you start buying these dishes, Mr. Chairman. They cost $5,000, $8,000, $10,000. Now you can buy them for $1,500. Big deal. They are going to be sold for $200, $300, $400 later on. The decoder now is what, $265, $365? That will come down. As long as competitive forces are probing, nourishing, generating, and inflaming this marketplace, you are going to have this problem solved.

And finally, I think there is no reason for a moratorium on scrambling. There is no reason for that, and if you impose that contrarian resolution you are going to keep stillborn the competition that you so sorely need.

So, everything we advocate, everything we say, everything we believe in is entwined in that little three-part program, no artificial pricing, let the market work, and let competition come into being. If the REA is locked out, than by jingo somebody in the Justice Department ought to unlock them awful fast. We want the REA in here. We want everybody that believes they can bring a program service to TVRO owners to be there offering that service.

And with that jubilant thought, I think I will conclude.

[The statement follows:]

STATEMENT OF JACK VALENTI, PRESIDENT, MOTION PICTURE ASSOCIATION OF AMERICA, INC.

Mr. Chairman, and members of the subcommittee, my name is Jack Valenti.

I am President and Chief Executive Officer of the Motion Picture Association of America, Inc. (MPAA). MPAA's members are among the leading producers and distributors of motion pictures and television programs in the United States. The member companies of MPAA are: Columbia Pictures Industries, Inc., The Walt Disney Company, De Laurentiis Entertainment Group, Inc., MGM Entertainment

Co., Orion Pictures Corporation, Paramount Pictures Corporation, Twentieth Century Fox Film Corporation, United Artists Corporation, Universal City Studios, Inc., and Warner Bros. Inc.

We at MPAA support and advocate these principles in the satellite earth station environment:

1. Copyrighted programs should be accessible to all in this nation who want and choose to receive them. No one should be denied a choice.
2. Marketplace prices for programs should be paid by owners of satellite earth stations, without government imposing pricing in any form.
3. The marketplace should be nourished by competition and not dominated by any one group or small band of powerful corporations.

That is what we believe in. That is what we support. And that is what we judge to be fair and equitable.

In the midst of the blur and confusion of controversy over TVROs, it is not without some irony that we find that, ultimately, what owners of TVROs want and what owners of copyrighted programs want are one and the same.

Consumers want access to our copyrighted material.

We want them to have it.

And consumers seems to understand that copyright owners can satisfy consumers' needs only if those who watch programs pay for what they enjoy viewing. It is neither an unreasonable need nor an unreasonable response.

What consumers pay, moreover, has to be finally determined by what we call "the marketplace." That is, no government agency, nor Congress, nor any other governmentally-designated body ought to set prices which will, more often than not, have no connection to the actual value or worth of the programming.

The TVRO owner brought his earth station equipment from a dealer. There was no government-set price for the equipment.

The owner may add new options to his TVRO, such as signal enhancers and improved equipment. He does this without government interference in the price he pays.

The TVRO owner bought the TV set on which he views all the wonderful programs that are fetched from the sky by his magical new device. He paid for the TV set at a marketplace price, not a government-set price.

Why should the price paid for the programs he finally receives be isolated from the normal pulsebeat of the market?

Less than two years ago, Congress enacted Section 705 of the Communications Act. That legislation set the groundwork for the free marketplace to deliver programming by satellite directly to paying TVRO subscribers.

Section 705 also recognized that scrambling is a legitimate and effective means of protecting the security and integrity of the electronic pipelines we use to get our works out to the public.

We urge the Congress to honor this commitment to protect copyrighted works whether delivered by satellite or by other electronic media.

Mr. Chairman, we want to see TVROs take their rightful place in the consumer video market. We want to eliminate any unfair non-marketplace advantage that the competitors to TVROs—primarily cable television systems—may have. We want to ally ourselves with TVRO owners to ensure they will not be denied access to satellite-delivered "superstations" so long as cable subscribers have access to them.

The key to a robust electronic media marketplace is full and fair competition—of two kinds.

First, there must be real competition between and among providers of satellite-delivered programming to TVRO owners.

Second, there should be persistent competition between and among those systems that deliver non-broadcast programming to consumers. There should be a real consumer choice among cable, MMDS, TVROs, and other technologies yet to come.

Vigorous competition will provide a necessary counterweight to the accelerating concentration of power within the cable television industry.

By Act of Congress in 1984, the cable industry was totally unshackled from regulation. This "emancipation" unhappily had a dark turn. It spurred, with greater velocity than anyone imagined, a fast-spreading trend toward concentration of ownership by cable multiple system operators (MSOs).

As always, when power is concentrated in a few hands, it produces some toxic side effects. The Wall Street Journal (see Attachment) and other trade and national publications have recounted examples of the raw use of concentrated cable power, the bleak underside of power, unmonitored and untethered.

If a healthy TVRO industry is Congress' objective, as it is ours, then indispensable to that goal is the denial to any single medium of dominance over the electronic video marketplace.

Mr. Chairman, I would like to share with you today our views on the growing TVRO marketplace, the pressing need for scrambling of satellite signals, and the importance of ensuring that this new industry is characterized by competition.

I would also like to explain why we believe that Congressional action along the lines contemplated in several bills pending before this Committee and its House counterpart is unwarranted.

DEVELOPMENT OF THE TVRO INDUSTRY

The TVRO industry and the cable industry spring from similar roots.

Each began with a handful of tinkerers who perceived a wealth of video programming shooting through the air, waiting to be tapped. The programming was not intended to be received by the tinkerer, but he found that irrelevant. He found equally irrelevant the principle that he should pay someone for the use of this property.

In each case, the tinkerer wanted to share his innovation with his neighbors. As the new technology spread, it soon became a nuisance to copyright owners. In due time, as these technologies began to reach hundreds of thousands of viewers, with no payment to copyright owners, they became a genuine menace. Circumstances then forced a sorting-out of the rights of producers and users, in order that these new technologies could become legitimate players in the video market.

Cable matured—indeed, thrived—when it finally entered the marketplace and became a business structured so that consumers paid programmers for what they received.[1] If there is to be a genuine TVRO marketplace, the same principle—that consumers should pay for the programming they enjoy—must obtain.

Today's TVRO industry is no longer the domain of the tinkerers. It's a real business that needs clear laws under which it can operate in the marketplace with investors, banks, distributors and customers.

Major electronics corporations are now manufacturing and marketing equipment to a growing and avid consumer population. One respected marketing study released last September projected that sales of TVROs to consumers would be a $5 billion plus business by 1989, with unit sales in that year of over two million.

The reported downturn in sales of TVRO equipment during 1986 may be attributable to several factors, including the inevitable shakeout among equipment builders, and the consumer confusion that has been preyed upon by some in the cable television industry and by some in the TVRO industry itself. As the marketplace scurries to serve TVRO owners, I believe the prospects are good for a healthy rebound.

The TVRO industry is ready to became a serious player in the marketplace. Those in the TVRO business tell us they want to play by the rules, and respect our property rights. We take them at face value.

The most important rule, the First Commandment of the relationship between copyright owners and the TVRO industry, is this: the security and integrity of copyrighted works must be protected.

In the case of satellite-delivered programming, this is most effectively accomplished through signal scrambling.

"SCRAMBLING": A CONGRESSIONALLY-RECOGNIZED MEANS OF COPYRIGHT PROTECTION

Signal scrambling ("encryption," in legal terms) is neither a mysterious nor a nefarious concept.

Scrambling is simply the invisible "wire" wrapped electronically around a private satellite-delivered signal. A scrambled signal is really no different than a message carried by a hard wire.

Not one of us would countenance tapping onto a wire to steal a privileged communication. A scrambled satellite signal is entitled to the same protection.

Congress reaffirmed this when it fixed in statute the right of those who use or control the use of copyrighted works delivered over satellite to protect their property rights through scrambling of these signals.

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[1] That is not to say that cable system operators always pay fairly for the programming they resell to consumers. The cable compulsory license remains as a vestige of inappropriate government intervention in the free marketplace on the side of cable television. This antiquated law permits cable operators to retransmit "distant" over-the-air TV signals without copyright owners' permission and without paying genuine "marketplace" rates for the privilege. Cable will never be a true marketplace competitor until this right to appropriate the property of others is eliminated.

By creating new Section 705 of the Communications Act in 1984, Congress reiterated that:

1. The unauthorized interception and viewing of scrambled satellite-delivered signals remains absolutely prohibited; [2] and
2. The marketplace, not the Federal government, should determine how, when and by whom any given scrambed satellite-delivered signal should be made available to private earth station owners.

With the development of new, secure encryption technologies, scrambling has become a reality. But this has not meant, as some have alleged, that the skies will go dark for TVRO owners.

Some program services, such as C-SPAN and devotional networks, may not choose to scramble because they desire to reach the largest possible viewing audience.

Other new unscrambled programming services, created expressly for TVRO viewers (e.g., Dishnet and Independent Satellite Television Network), have announced they will not scramble.

In addition, several satellite-delivered cable program services that are primarily or exclusively advertiser-supported have announced no plans to scramble.[3]

All of these services will remain available to TVRO owners because the individual program services freely chose to make them available.

That's just what Congress intended when it enacted Section 705. It neither mandated nor prohibited scrambling—it left the decision to the marketplace.

Nor did Congress make scrambling the sine qua non for protection under the Communications Act. Many satellite-delivered programs are not intended for viewing by the general public. They retain full protection under Section 705, even if not scrambled.[4] Even those satellite-delivered cable services which private TVRO owners are free to enjoy under Section 705(b) are fully protected against unauthorized non-private use by this law.

As Congress recognized, copyright owners have the absolute right to seek protection of their property through signal scrambling. No responsible person would challenge that right. In fact, the chairman of SPACE, Taylor Howard, and many others have reiterated time after time that the right of satellite-delivered cable program services to scramble and market their signals is undisputed.

Therefore, TVRO owners will continue to have access to many satellite-delivered cable program services that have chosen not to scramble. They also will have access to a broad range of services that have chosen to scramble, under terms and conditions established in the marketplace.

COMPETITION: THE KEY TO A HEALTHY ELECTRONIC MEDIA INDUSTRY

As noted in my opening remarks, a healthy electronic media marketplace depends upon vigorous competition of two kinds.

First, there must be competition between and among providers of satellite-delivered program services to TVRO owners.

Second, there must be competition between delivery systems—TVROs should be permitted to compete head-to-head with cable television and other services.

COMPETITION AMONG PROVIDERS TO TVRO OWNERS

Scrambling has permitted program services to secure their signals, and to market them to TVRO owners no matter where they may live, at marketplace prices.

Market rates will be determined, of course, by free and open competition. Consumers will benefit from vigorous price competition among those satellite-delivered programming services that have chosen to extend their market to include TVRO owners.

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[2] This reiteration, coupled with increased civil and criminal penalties for unauthorized commercial use of satellite-delivered signals, has been critical to our fight against commercial piracy of satellite-delivered signals. Unauthorized use of these signals by hotels, motels, taverns, and other establishments has been a viral contagion, costing copyright owners tens of millions of dollars a year. Importantly, scrambling also inhibits piracy of these signals beyond our national borders, another vexations problem for which our remedies are limited.

[3] Under Section 705(b) of the Communications Act, those satellite cable services that choose not to scramble and choose not to create a marketing system to serve private TVRO owners forfeit their protection against interception and noncommercial use by private TVRO owners. This is a specific, limited exception to the board protections accorded to satellite signals by Section 705.

[4] For example, "backhauls" of news and sports feeds by the networks, delivery of fresh syndicated television programming (such as Entertainment Tonight and Hour Magazine) to earth-station equipped TV stations, and certain internal communications between networks or syndicators and their affiliated stations, are not intended for public viewing.

Efforts to serve TVRO owners have come a long way in the last 18 months, since the passage of Section 705. We already see real evidence of aggressive price competition.

Last fall, Time, Inc.'s Home Box Office announced that it would market HBO and its companion movie service, Cinemax, directly to earth station owners for $12.95 per month per service, or $19.95 for HBO and Cinemax in combination.

Shortly after HBO/Cinemax made public its rates for private TVRO service, Showtime/The Movie Channel (its smaller competitor) announced rates some 15 percent lower.

In the last several weeks, both HBO/Cinemax and Showtime/The Movie Channel have announced further competitive price cuts, offering discounted annual rates to TVRO owners.

On July 1, CNN and Headline News also began scrambling and marketing their programs directly to TVRO owners. CNN has also announced joint marketing agreements with HBO and (tentatively) with Showtime, whereby CNN and Headline News will be sold in a "package" with the movie services. Under these plans, a TVRO owner can make one phone call to HBO or Showtime to order both the movie services and the news services.

Moreover, CNN has implemented a marketing program in conjunction with Anixter, a licensed manufacturer of VideoCipher II decoders. And CNN has already struck agreement with 11 satellite earth station distributors to authorize local dish dealers to market CNN and Headline News.

As noted, all of these services are available directly from the program services, or, in many parts of the country, through intermediary providers.

As a result of this competition, we find that TVRO owners can obtain access to those satellite-delivered cable program services that have already scrambled at prices that are highly competitive with what cable subscribers pay for the same service.

There are other favorable developments in this new marketplace:

Every satellite-delivered cable program service that has announced scrambling plans has also announced it will market its service to TVRO owners.

Numerous companies and other entities (such as the National Rural Electrification Cooperative Association) have announced their intention to provide convenient packages of programs to earth station owners.

A single signal decoder system (the M/A-Com VideoCipher II) is emerging as a de facto industry standard. This limits the amount of new equipment the TVRO owner needs to receive these signals.

Multiple companies are manufacturing and marketing signal decoders, and many earth station manufacturers—including M/A-Com, Channel Master, Birdview and Standard Communications, plan to incorporate decoders into their new receiving equipment, at low prices.

All of this augurs well for TVRO owners. We share the interest of members of Congress that this form of competition should continue to expand.

COMPETITION AMONG DELIVERY SYSTEMS

Competition between media increases the diversity of ideas, and maximizes consumer choices. To this end, our national communications policies discourage concentration of control over the media by a few entities, in order to protect the public interest in competition both nationally and locally.

For example, a TV station owner may not exercise control over the operation of cable television systems in the same area where he holds a TV license. And we limit the total number of TV stations any one entity may control nationwide.

By the same token, we should be wary that cable system operators not unduly restrict or control the availability of satellite-delivered services to consumers in local markets. This would be an unwelcome extension of the already alarming power which now resides in too few hands.

In 1982, the largest cable multiple system operators (MSOs) served 12.9% of all cable subscribers. In 1986, the top two MSOs will serve at least 24.5% of all cable subscribers. Some estimates indicate the top five MSOs now serve over 37% of all cable subscribers. That share is projected to increase to nearly 50% by 1990.

Let us understand, with awful clarity, what this means.

A cable system is a geographic monopoly. There is only one cable system to a neighborhood or a portion of a city. If you, as a cable subscriber, don't like the programming or the service or the treatment you receive from your cable system, you have no alternative. You either cancel your subscription, or you hold your tongue and your anger, because you have no place to go, no competitor who will give you what you want.

Meanwhile, the cable system is the sole arbiter of what the community sees on its TV set.

This kind of imperial authority is totally unlike that of any other communications medium—unlike newspapers, TV stations, even networks. It is absolute and free of the nagging torment of competitors.

Now, let us multiply this power. If two or three corporations control 50, 60 or 70 percent of all cable subscribers, that means three entities literally tell the American public what they will or will not see on cable. As of this moment, garmented with such concentrated power, the big MSOs have not been shy in throwing their weight around.

Cable must not be permitted to stifle the growth of its most promising new competitors. Local cable system should be fully subject to competition from TVROs, MMDS, and even direct, head-to-head competition from cable systems serving the same franchise area.

SUPERSTATIONS

As I mentioned above, one of the unfair advantages cable television enjoys is a compulsory license under copyright law.

We have always been, and will always remain, opposed to the compulsory license. However, if we must continue to live under that regimen for the near future, it would not be fair for the law to mandate that cable systems can have access to "superstations" [5] while denying such access to TVROs.

But Section 111 of the Copyright Act has just this result, at least in the preliminary judgment of the Register of Copyrights.

We would like to see this discriminatory effect of the copyright law corrected, so that superstation signals are available to TVRO owners.

With this in mind, we have been working with the House Subcommittee on Courts, Civil Liberties, and the Administration of Justice, and interested parties, to ensure that superstation signals may be scrambled, and to fashion a mechanism that will ultimately permit those who wish to distribute superstation signals to TVRO owners to acquire distribution rights at rates fixed by the marketplace (not by government).

As you may know, Mr. Chairman, on JUne 26, Representatives Kastenmeier, Synar, Wirth, Moorhead and Boucher introduced a superstation scrambling bill, H.R. 5126, "The Satellite Home Viewer Act of 1986".

MPAA strongly supports the objective of H.R. 5126: guaranteeing TVRO owners access to scrambled superstations.

Nonetheless, we do have a number of concerns about the way H.R. 5126 would achieve that important goal.

I intend to make both our support for the objective of H.R. 5126 and our specific concerns known on August 7 when the House Subcommittee on Courts, Civil Liberties and the Administration of Justice holds a hearing on this important issue.

At this time let me provide this Committee with some of the important points I will include in my upcoming testimony:

Any such arrangement must place reasonable limits on the total number of superstations that may be marketed.

Any such arrangement must be limited in application only to the distribution of scrambled, satellite-delivered superstation signals to TVRO owners. It should be understood by all parties that any such arrangement does not provide a model or precedent for distribution or reception rights for any other type of video signal, including pay or basic cable program services.

Any new system must, now or soon, lead to a marketplace design that is not a compulsory license, and any interim, transitional measures must be viewed as a process leading away from artificial pricing and toward a free marketplace. The bill must also have a strict "sunset" provision for this interim system, to allow for a free marketplace to emerge and operate.

In our view, Section 705 of the Communications Act has made possible a legitimate TVRO industry; it creates no impediments to a free marketplace. By contrast,

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[5] "Superstations" are terrestrial TV station signals which are intercepted off the air and retransmitted nationwide by satellite by "passive carriers" for resale by cable systems and other media. WTBS (Atlanta), WOR (New York), WGN (Chicago), WPIX (New York) and KTVT (Dallas) are the five TV stations which have become "superstations," voluntarily or otherwise.

Section 111 of the Copyright Act does impede the TVRO industry from competing with cable. For that reason, the latter law is an appropriate matter for Congressional review.

WHAT SHOULD CONGRESS DO AT THIS TIME?

Mr. Chairman, I would like to conclude with some brief comments on what I believe Congress should and should not do at this juncture.

There are several legislative proposals pending before this Committee and its House counterpart which would interfere in various ways with the development of the TVRO marketplace. None of these should be enacted.

1. Bills to prohibit signal scrambling, to mandate federal rate regulation of programming or descrambling equipment, or otherwise to interfere with marketing of program services run contrary to the Congressional commitment to a free marketplace. They threaten to disrupt the timely development of new competition.
2. Any legislation that would interfere with the right to scramble satellite-delivered signals would be particularly heinous to copyright owners. We would suffer irreparable harm, and would be utterly without recourse.
3. It would be inappropriate for Congress to attempt to set rates, terms and conditions for access to satellite-delivered programming. Congress and the FCC have deregulated rates for every other medium, upon the sound principle that these should be determined in the marketplace. That principle should be equally applicable to TVROs. Ultimately, genuine price competition is a far better guarantor of consumer welfare than rate regulation.

We believe the necessary statutory framework is already in place. Section 705 of the Communications Act legitimized and established a firm foundation for the TVRO industry. It is now up to the marketplace to continue to make it work.

AS you know, the Justice Department is investigating matters pertaining to the scrambling and marketing of satellite-delivered cable program services. We hope the investigation will be concluded expeditiously, and will provide the appropriate basis for action, if any is needed, to address competitive problems that may arise in the marketplace.

Congress can also help dispel public confusion over the direction of the TVRO marketplace by ensuring that consumers have access to the information they need to make intelligent choices on whether to buy TVROs and to subscribe to scrambled satellite-delivered services. We hope that one of the results of these hearings will be an improved and accurate flow of information to the public.

Most importantly, we support a TVRO marketplace unencumbered by artificial governmental restraints. Public access to copyrighted film and video works delivered by satellite should be maximized, but the terms and conditions of access should be freely determined in the marketplace—not be government fiat.

Apart from the superstation and public information concerns I discussed earlier, there is no compelling need for Congressional intervention in the earth station marketplace at this time. Congress can best serve the public interest through the kind of action you are taking today: monitoring marketplace developments to ensure that as the market matures, full and fair competition prevails.

The **CHAIRMAN**. Mr. Howard.

Mr. **HOWARD**. Mr. Chairman and members of the subcommittee and staff:

I am very pleased to be here to testify on this problem. With me is Television Viewing Rights Coalition attorney Richard L. Brown to answer some detailed questions if you have them later.

My principal message is one that I have heard come from you today, and that is that the marketplace is in failure. And anybody that does not think the marketplace is in failure is getting their paycheck from someplace else than I get mine. I just cannot imagine somebody sitting here in Washington telling me that the marketplace is working or has worked.

If during my testimony we hear the cavalry come down the hall and bring us a packager that is really working, please interrupt me and I will shut up and we will listen to that person. But there is not one yet.

This is not a new phenomenon, and it is clear there has been a struggle over the control of programming distribution. The marketplace cannot work as long as we have this web of interconnection and monopoly that has been there existing in the communications industry for a long time. Competition is not in force when we are being denied access, when programmers refuse to distribute in a competitive manner, and when scrambling devices are sole sourced at very high prices.

The question is an old one. Some of us here have spent over 4 years fighting just for the legal right to be alive, to own a dish, to have programming. At one time it was all going to be denied to us.

That all changed, due largely to the efforts of Senators Gore and Goldwater in amending the Communications Act of 1984. Even then, there was concern over access to the programming of any of the programmers. While the vast majority of programmers have verbally agreed to home satellite reception, there are still substantial omissions. Thus, we strongly support the provisions of Senator Gore's bill, S. 1618, mandating a legislated right of access.

With respect to the networks, millions of Americans simply cannot view the transmissions of networks unless they use the satellite antenna. CBS intends to scramble its network feeds and not make them available to dish owners and, in a strange twist, wants to replace space age technology with an old technology that has been tried and pushed on for 25 years and simply has not done the job yet.

CBS has benefited from the use of the limited public satellite spectrum and is directly subsidized by the American taxpayer in using this space segment of our system. Rural taxpayers should not be deprived of the benefits of their own investments in their taxes and in their systems.

CBS or any other network should not scramble its finished network feeds unless Americans who cannot view the networks are given an opportunity to continue to do so by satellite.

Eastern Microwave, the carrier of Superstation WCR, has scrambled its signal and is not making it available to dish owners, they say, "in response to the cable industry's desired scrambling of programming services." Carriers such as Eastern Microwave point to uncertainty in copyright laws as to whether they can serve dish owners or not. In my understanding, there is some move in H.R. 5126 to relieve this.

My view is this should have been done before those people were allowed to scramble. It is too late now. We need the relief from the copyright law to get that done. And I urge that there be action in the Senate as well to complement that.

The real stake is in the future. All of you know we are dealing with the future of telecommunications. We are dealing with satellite distribution, which in my view is going to grow to be much larger than cable distribution ever dreamed of growing because of the economy of deliverance.

The real future is in Ku-Band or what is known as K-Band or 12 gigahertz, and a legislative mandate is really necessary to assure access there. Current C-Band satellites are failing. They run out of fuel in 5 to 10 years. We have no launch capability for a while, especially for commercial satellites.

But as they go down, the cost of them is going to go up for the individual channels. K-Band is going to become the market. RCA and HBO have announced a joint venture whereby HBO programming will be on RCA-HBO Ku-Band birds, and the programming will not be available to home dishowners, but only to cable systems.

Substantial investment by millions of Americans in earth stations will be rendered useless by this. I mean, it is a silly thing to do at this stage. We need your help to assure that in the future we have that access to the Ku-Band or any other frequencies that do emerge.

In program distribution, there are a number of problems and they have all been alluded to by you this morning. The distribution program by HBO has named cable operators as exclusives. It restricts cable operators from dealing outside of their territories. HBO in particular is involved in kickbacks or rebates to local people.

The real problem is the rural American cannot get it through the present structure except at very, very high prices.

There is another tactic, the two-tier policy, where a dish subscriber pays a dollar for a signal where a cable subscriber for the same thing is charged only 17 cents. These have come in. They are very, very inconceivable precedents to be set at this time.

There are several remedies. They have been suggested in Senator Gore's legislation in opening up the marketplace. And I can only echo Mr. Valenti in that marketplace solution.

Finally, I turn to the issue of encryption. Encoders are incredibly high priced. They are not selling. There is resistance to their sale. At $395, they simply are not going to penetrate.

As a manufacturer who has looked inside that decoder, my cost in manufacturing it would be considerably less. It is going to take an assured marketplace to make it less, and it is going to take a standard in encoding in a national way to make it work.

And those programmers are going to have to be able to serve anybody's decoder, no matter how it is manufactured, if we are going to get that cost down.

Thank you for your attention. I will be available to answer your questions.

[The statement follows:]

STATEMENT OF TAYLOR HOWARD, DIRECTOR OF RESEARCH, CHAPARRAL COMMUNICATIONS, INC.; CHAIRMAN OF SPACE, SATELLITE TELEVISION INDUSTRY; AND MEMBER OF THE SATELLITE TELEVISION VIEWING RIGHTS COALITION, INC.

Mr. Chairman, Members of the Committee and staff, I am pleased to be here today to testify on a subject which is extremely important to the American television viewing public. I am a founder of Chaparral Communications, Inc., one of the largest suppliers of components to the satellite earth station industry, and a leading supplier of receivers. I am Chairman of the Board of Directors of SPACE, the Satellite Television Industry Association, Inc. I am also testifying today as a member of the Satellite Television Viewing Rights Coalition, Inc., which has recently been formed to coordinate the legislative and legal issues on behalf of the home satellite earth station industry. Prior to my involvement in the satellite earth station industry, I was a research professor of electrical engineering at Stanford University and I am now Professor Emeritus. I have been involved as a principal investigator for NASA in the Appollo, Mariner and Pioneer Programs, as well as in the forthcoming Galileo Mission to Jupiter. In 1973 I received NASA's medal for exceptional scientific achievement.

INTRODUCTION

A decade ago, I constructed my own home satellite earth station. It still works today. Since then, through American entreprenueurs and innovation, close to two million American families—nearly five million people—have come to enjoy the benefits of home satellite television. Just ten years ago, I did not dream that so many millions of Americans would come to enjoy, on such a personal level, the achievements of space age technology so soon. And now that they have, we should encourage robust development of this technology and the benefits that it provides. That is why I ask for your immediate consideration of the issues that we are bringing before you today. These remarks will address three specific areas of concern: continued access to programming, inequities in the distribution of scrambled programming, and the need for encryption standards.

ACCESS TO PROGRAMMING

The networks

Today millions of Americans simply cannot view the transmission of the commercial television networks unless they use a satellite antenna. These people are usually located in rural America. They cannot view a "local" affiliate because there is none, or its signal is blocked by terrain factors, atmospheric conditions or man-made obstacles. Absent satellite television, they are denied what the rest of us take for granted. By means of a satellite antenna, they are able to view CBS and other television network feeds, complete with network commercials. The feeds they view are identical to the feeds the local affiliates retransmit (where there are local affiliates) absent only the locally inserted material including local commercials.

CBS intends to scramble its satellite-delivered signals and not make any of them available to home satellite earth station users, no matter where they are located, and no matter what the circumstances.

We believe CBS has an obligation to serve every potential viewer in its service area, no matter what kind of antenna is used. Does it matter that someone who is blocked by mountains and cannot view the local CBS affiliate instead utilizes an earth station? Does it matter that someone outside the range of the local affiliate views the parent network's transmissions from the sky? CBS, a network which has been at the forefront in defending, against all challenges, its right to speak to the American public is now denying the right of millions of Americans to view and listen.

CBS defends its decision to cut off service to hundreds of thousands of homes by stating that it has created a "task force" to look into how to get CBS service to these locations. We are pleased that the development of home satellite earth station technology has caused CBS to recognize that as a broadcast network, it has an obligation to provide its programming to all Americans. However, it is highly unlikely that any significant percentage of the one million plus viewers currently unable to view CBS via means of a local affiliate will be able to do so at any time in the near future, inspite of CBS' "task force." CBS has known for years that not all Americans are able to receive its signals. Translators have not, will not and cannot fill that void. Translators have been around for more than a quarter of a century, yet service is still not universal. However, home satellite earth stations are, today, doing the job.

CBS has expressed concern that home viewing of its network feeds threatens to undermine its relationship with its local affiliates. This fear is misplaced. Home satellite earth station owners who reside within areas where a quality network affiliate signal can be received, view that network affiliate. In addition to the network programming, such affiliates also provide local programming. CBS affiliates have taken great pride in the provision of local service, such as news and public affairs. In short, there is no evidence that home satellite earth station owners residing in the area of local broadcast affiliates routinely view the network feeds rather than the services of those local affiliates. In any event, there is no evidence of any material adverse impact by any viewing of satellite feeds within local service areas of broadcast stations.

CBS has claimed that its network feeds are akin to private telephone calls. But most telephone calls are not intended for ultimate distribution to the public nor are they easily receivable. CBS' network feeds are destined for viewing by the public with only local commercials are programming added. CBS, as one of the major telephone networks, occupies a unique place in the American life. It has benefitted from the use of the public spectrum to transmit its network programming to its affiliates. In utilizing satellite technology CBS has lowered its operating costs over what they would otherwise have been. In moving to satellite transmissions, CBS has occupied a portion of the nation's limited spectrum, thus denying the use of that spectrum to others. Additionally, CBS' use of satellites has been, and is continuing to be, directly subsidized by the taxpayer.[1] Rural taxpayers should not be deprived of the benefits of their own investments. CBS or any other network should not scramble its finished network feeds unless Americans who cannot view these networks are given an opportunity to continue to do so by satellite. By scrambling its feeds to affiliates, while refusing to provide access, CBS is terminating service to millions of Americans without any rational or logical justification.

Superstations

Beginning in the mid-1970s, entrepreneurs began transmitting various local television broadcast stations from their original markets up to a satellite and distributing the programming throughout the United States to cable television systems. Almost overnight Ted Turner's Channel 17 (WTBS) was transformed from a small, struggling UHF station into a major force in communications with some 35 million subscribers. WTBS has been followed on the satellite by WOR-TV (Channel 9), WPIX-TV, New York; WGN-TV, Chicago; and others. As a result, cable television viewers whose systems carry the superstations can now view a greater abundance of information and ideas. Home earth station owners are also able to view these transmissions.

Most of the common carrier services transmitting these signals have indicated they intend to scramble the superstation signals. WOR-TV is transmitted by Eastern Microwave, Inc. Eastern pays no compensation to either WOR-TV or to the copyright holders from whom WOR-TV obtains programming. Eastern does impose transmission fees on cable television companies which range, depending on volume, from one cent to ten cents per subscriber per month according to its FCC tariff. There is no change for cable subscribers in excess of $750,000 per company.

In Eastern's own words, "[I]n response to the cable industry's desire for scrambling of programming services . . ." it has scrambled its transmission of WOR-TV. It has also failed to amend its tariff to permit reception of those signals by home satellite earth station owners. A reason given by some carriers for this refusal is that under copyright law, they may only transmit broadcast stations to cable television systems without potentially infringing the copyrights in the programming.

Individual home earth station owners who view satellite programming in their home do not engage in any activity prohibited by the Copyright Act, because there is no public performance. So long as Eastern Microwave's home earth station customers are not copyright infringers, we do not believe Eastern Microwave should be found to have engaged in copyright infringement. Another argument is that the very act of scrambling its signal might make a carrier a copyright infringer. A bill to resolve this uncertainty (H.R. 5126) has recently been entered in the House of Representatives. It has significant support from both the Chairman of the Copyright and Communcations Subcommittees and a hearing is scheduled for next week. We strongly urge that whatever uncertainty exists should be resolved before the superstations are scrambled, and not used as an excuse to deny service to millions of Americans. It is clear that Eastern is scrambling because cable wants it to. That simply is not enough. Our industry is committed to solving whatever problem may exist. To scramble first is to put the proverbial cart before the horse.

Ku-Band

HBO, Cinemax, Showtime/The Movie Channel and the other major subscription and basic services are now scrambling, or intend to scramble, their transmissions. Up until passage of the Satellite Viewing Rights provisions (Section 705(b)) contained in the 1984 Cable Communication Policy Act, these services refused to deal with home satellite earth station owners. They refused offers of compensation from homeowners for the viewing of their programming.

These services are representing to you that the situation has now changed. HBO and Cinemax are scrambled and they have announced a mechanism by which home satellite earth station owners may obtain access (*albeit* on terms and conditions with which we disagree). However, there are strong indications that this access "solution" is only a temporary one.

HBO's transmissions as well as those of many other satellite programmers are gradually migrating from the C-Band (4/6 GHz) commonly in use today to the Ku-

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[1] In 1961, it was NASA's poicy to recover incremental "out-of-pocket" launch costs. This later was changed to recovery of "all reasonable costs." As late as last year, NASA reported to Congress that it had been reimbursed for only 24 percent of its shuttle flight expenses.

Band (12 GHz utilizing smaller diameter antennas). HBO and RCA, for example, have reached an agreement to form a joint venture to purchase their own Ku-Band satellite. Prior to the availability of this satellite, both HBO and Cinemax will be available on another Ku-Band CBS but only to cable television systems. The supposed reason for the use of these Ku-Band satellites is that it enabled cable operators to use smaller diameter and less costly reception equipment and it substantially reduces interference problems caused by terrestrial microwave transmissions. Similarly, Ku-Band transmissions will present advantages for home earth station owners also, particularly in more than environments.

Nowhere in the decision to migrate to Ku-Band are the interests of home satellite earth station owners rights considered. In fact, HBO is quite clear. Ku-Band transmissions will be denied to homeowners, Joe Collins, HBO President, stated: "Unlike HBO C-Band transmissions, Ku-Band transmissions of HBO and Cinemax will be scrambled from their onset and are intended to be received only by cable affiliates . . . 'Since our Ku-Band signals will be encoded and there is no installed base of consumer equipment to receive Ku-Band transmissions, HBO currently plans to offer its services to home TVRO owners only through C-Band satellites . . . '."

C-Band satellites have a future useful life of about five to ten years. At that rate, today's C-Band satellite transmissions will soon cease. As satellite subscription services are beginning to migrate from C-Band to Ku-Band, that migration might well be accompanied by service termination to home satellite antenna owners by companies such as HBO. There is no rational business reason for this service termination except protection of cable revenues. To permit that plan to take effect is to deny the benefits of satellite television so recently recognized by the Congress. That plan cannot be allowed to become a reality.

THE DISTRIBUTION OF SATELLITE PROGRAMMING

A severe distortion of the marketplace is today denying millions of Americans the benefits of home satellite earth station technology. Because of their economic leverage over the providers of satellite programming, the nation's largest cable television companies have the American consumer and particularly the consumer in rural areas, in a vise grip. The cable television industry recently deregulated by Congress is now seeking to control the home satellite earth station industry through controlling satellite programming.

The cable industry has made it very clear through spokesmen from the largest cable companies at its national trade association meetings and elsewhere, and by the creation of a consortium to be the pipeline to the home earth station market, that it wants control (exclusive control, if possible) of the distribution of programming to home earth stations. Intimations have been made that the programmers feel they are at the mercy of the cable operators, particularly the large cable operators called multiple system operators ("MSOs").

The major MSOs have such strong economic power that it is no surprise that the programming networks stand in fear. Most of the satellite networks, whether pay television or basic, have not been profitable and a few have only recently turned profitable in the last year or two, after many years of operation. If the top MSOs were to remove a particular cable programming network from their cable systems, that network would suffer severe economic setbacks and most of the networks could well be put out of business. When the word went out from the cable leaders to all the programming networks to scramble and to be "cable friendly," that is exactly what happened. The term "cable friendly" means not only to scramble but to sell programming to dish owners through the cable operator. While most agreements to sell to dish owners through cable have been "nonexclusive," they are nonexclusive in theory only. The major satellite subscription services have chosen not to deal with any independent-of-cable distributors or earth station retailers, or to even setup any criteria under which any independent-of-cable party could qualify to distribute their programming.

This is not a new problem. It is a problem which in one form or another has been with the industry since its inception. In the early 1980s, some of the major program suppliers sent letters to the manufacturers of home satellite earth station antennas threatening them with lawsuits for merely manufacturing satellite reception antennas. When some home antenna owners sent checks to HBO for viewing of its signal, these checks were returned with a letter stating that HBO only dealt with cable TV companies and if the viewer wanted to watch HBO, he or she had to contact the local cable TV company (even if there was none in the area or it didn't carry HBO). One cable operator, a large media conglomerate, went so far as to sue a home earth station dealer merely for selling satellite reception equipment.

This is also not a new problem for this Subcommittee. Four years ago, our association testified before this very Subcommittee pointing out the anticompetitive behavior of some of the largest multiple system operators. We urged the Subcommittee to look at the actions of the cable industry and not at what it said. At that time, the major subscription services were discriminating against home satellite dish owners and others for the benefit and protection of the cable television industry. Today they still are.

This distortion in the marketplace may be seen by two examples, one taken from the recently announced TCI Plan and one from the HBO plan. Both plans have been touted as examples of how home satellite earth station owners can gain access to satellite programming. Both plans discriminate against the consumer and act to protect the cable monopoly.

The TCI plan

When TCI purchases, for example, CNN for retransmission to its cable TV subscribers, it pays approximately $.17 at most per subscriber per month. For the identical CNN service for resale to home dish owners, TCI has agreed to pay one dollar per month per subscriber. Why has TCI consented to this divergence in price for the identical service? As the nations largest MSO, it certainly has great leverage in its negotiations. By paying more for home dish viewers than cable subscribers, TCI insures that home dish owners will have to pay more than cable subscribers for the identical service. Thus, it protects its cable monopoly. Consumers will not likely buy a dish in a TCI area if they have to pay more for programming than cable subscribers do. It also sets a precedent for others who purchase the CNN programming for resale to home dish owners. By agreeing to a $1.00 cost, TCI insures that if other non-cable parties are able to purchase CNN for redistribution, the rate they will be forced to pay will be high enough so as not to undercut the cable retail rate.

One justification given by cable is that the programmers are minimally profitable and this is a way to boost their profitability in orders to keep them going. This is nonsense! First, in areas which are not cabled, this will artifically drive up the price of programming to a home earth station consumer because the cable operator has to pay more for the programming and the home earth station owner receives no credit for buying his own equipment. Recognizing that there are distribution costs to serve the home earth station owner, he or she still ought to be able to buy the programming without the same mark-up that the cable operator normally needs to amortize the cost of the cable television plant. The cable operator did not build the earth station consumer's plant!

The reason the cable operator will pay more for earth station rights is more apparent when considering cabled areas. The cable operator is willing to pay more not to enhance the program network, but really for self benefit. This paradox—to pay more willingly—becomes understandable when one realizes that the cable operator will be able to stifle earth station competition to its own cable operations in the franchised area—especially if there is no independent program distribution mechanism to compete with the cable operator. This is because high prices for programming simply retards earth station sales. If one had to pay $15.00 to rent a video cassette, the sale of VCRs would go down. The same applies to earth station sales.

The reason why cable wants to stifle earth station sales is because stations lessen the number of potential cable customers and even take away existing cable customers who disconnect when they purchase an earth station. A cable subscriber, valued at $1,000-$1,500, is far more valuable to a cable operator than an earth station subscriber. Therefore, we cannot expect cable operators to wholeheartedly serve the earth station consumer when such consumers adversely affect cable operations. If the cable operator were truly interested in serving the earth station market and were also interested in improving the income statements of the program networks, as some claim, then the cable operator would be willing to pay a slightly higher rate for all of its subscribers—across-the-board—both cable and home satellite earth stations. Because home earth stations would likely be only a small percentage of the total number of subscribers for the cable operator, in most cases, it would seem that a small increase for all subscribers would keep prices to all consumers reasonable.

The HBO plan

The HBO plan calls for cable operators to sell the HBO programming to home dish owners. The operators are permitted to sell within their franchised areas, but not much outside of their franchised areas. This precludes price competition between cable operators inside and outside of franchised areas. Rural subscribers living outside the franchised area have to call HBO directly. They have no other choice. For each such customer, HBO receives nearly double what it receives from a cable subscriber.

Rural customers are paying a subsidy to keep urban and suburban cable rates down. The presence of independent middlemen that could buy from HBO at approximately the cable wholesale rate would inevitably reduce to reasonableness the consumer price in rural areas.

In cable areas, the notion that HBO, selling through an 800 number, is competing directly with the cable operator is a myth. First, HBO refers all calls in cable areas to the local cable company. Even if the earth station customer chooses not to deal with the local cable operator, HBO will service the consumer at list price but will credit the cable operator for such consumers. It will kickback $5.00 per month to the cable operator for doing nothing. Second, HBO has priced its programming high enough that cable operators can sell within their franchised areas at a high price that will deter earth station sales. The perceived value of an earth station is in the diversity of programming opportunities and affordable price. A consumer that pays for his or her own plant also wants programming at a reasonable price. As long as HBO maintains a high price for direct sales, the cable operator can charge essentially as much as desired (under the HBO price) in the franchised area. This will deter earth station sales.

It is difficult for HBO to be perceived as earth station friendly. Many consumers buy earth stations because they are dissatisfied with cable operators and limited choice. In fact, in HBO's manual, HBO states ". . . the overwhelming majority of TVRO owners in wired areas are former cable subscribers. Dissatisfaction with local cable service is most often cited by these customers as a motivation for dish purchase. Other reasons include a more favorable price/value comparison of TVRO ownership to cable service and the optimum number of available premium services." It makes no sense for consumers who are dissatisfied with cable to have to buy programming from cable. Sales would expectedly be greater from this category of consumers if they could deal with another entity other than cable, e.g., the earth station retailer. Instead, HBO will not permit satellite earth station retailers to demonstrate the decoded signal of HBO services in their showrooms. This, of course, deters earth station sales.

It appears to our industry that HBO as a sister company to ATC, the second largest MSO, and the largest supplier of pay television to the cable industry at large, is indeed being cable friendly. We believe they should be mandated to start an independent-of-cable pipeline to the earth station consumer. These kinds of practices described should be curtailed by legislation, for as others follow suit, there will be no earth station industry to compete with cable.

To date, the major satellite subscription services have been unwilling to license the sale of their programming at cable-like rates to any entity unaffiliated with a franchised cable television operator. Several groups including Canaan Communications, Viewers First National, and others have tried without success to obtain such viewing rights. Recently, at hearings in the U.S. House of Representatives, great attention was paid to the efforts of the National Rural Electric Cooperative to obtain such rights. Based on the press reports, which have occurred since those hearings, it remains doubtful that NRECA will be able to purchase programming rights to the major services at anything close to the rates which cable operators are able to purchase them. At the same time, none of the satellite services have established criteria under which it will deal. It is a shell game, but no matter which shell is lifted, there is no pea.

The growth of cable systems is reaching its peak; the growth of pay networks and basic services has been flat over the last year. Therefore, the nonaggressive stance of the programmers towards the satellite earth station consumers is against their economic self-interest, and appears to be motivated by some fear of expanding their business opportunities. I think most programmers will have a hard time telling you, in public, about their fears. But their fear of cable MSOs is obvious in the marketplace. Clearly, something is missing from the equation. Competition. The fear should be removed by legislation.

ENCRYPTION

The issue of decoding is not a new one to us. As early as 1981, in testimony before the Congress, SPACE stated that scrambling was one mechanism for ensuring payment to programmers, particularly pay television programmers. It is not the question of scrambling per se with which there is a quarrel. Motion picture studios have made it clear to the cable television operators and to the pay television networks that the theft of service with respect to feature films is intolerable. We understand

and agree with this. The overwhelming majority of this theft of service, however, is along cable television lines. Yes, there is theft of service by some SMATV's that take the service without paying for it, as well as by some cable systems. But the billion dollar a year problem of theft service along the cable lines, which is estimated to be some five million illegal "subscribers," is not going to be cured by scrambling of programming on the satellite. This is because the decoding will occur at the cable television headend. It is after the cable headend that the theft of service occurs. What we ought to be working toward is a universal scrambling system that will allow for every television set in America to receive scrambled signals on a uniform basis. With a decorder associated with every television set, we would end theft of service and the nearly one billion dollar per year problem that it is causing. The benefits of a universal decoding system would also redound to the consumer who, over the long run, would pay less for decoding systems because of the large number of them that would be produced. With universal decoding, consumers should also pay less for programming in the long run because of the absence of theft of service. That is, there will be greater revenues to the cable industry, the program distributors and producers, thus containing the pressure for rate increases.

This is not the direction in which we are heading. The decoder, which is being touted as a de facto cable standard, does not work in a manner that would allow for individual decoding in the home of a cable television subscriber. It has been said that cable operators want it that way, otherwise there will be too much power in the hands of the satellite television networks. Decoding at the television set might make cable television systems into common carriers. It is argued that cable would merely deliver the signal down the line to the cable subscriber who would in turn become a customer of the programmer. I understand the radicalism of that notion and the fear it must strike in the cable operator's hearts, as does the thought that the dish owner would be able to deal direct. I think the Congress could look at this in the context of the legislation before it and take steps to ensure that cable would remain a non-common carrier.

Again, the benefits of scrambling to every cable customer would be that instead of a relatively small number of decoders to serve the present two million earth stations, there would be an immediate market for some 35–40 million decoders. This would certainly bring the price down to a reasonable level and again, it will eliminate the real theft of service problem.

In order to accomplish this goal, there would be national standards set by the Congress or an expert body, such as the FCC, with input from the various industries that would be affected. The emerging de facto decoding system has come about, in large part, by the fact that HBO has chosen the M/A-Con system and some MSOs during the last year have vigorously encouraged programmers to scramble their signals as soon as possible at the risk of being cut-off from their cable systems. Consequently, there has been a rush to the M/A Com system, irrespective of the merits of that system. But being first does not mean being right.

What is being created here is a proprietary monopoly for M/A-Com. Yes, they have invested millions of dollars in development and yes, those that pursue economic activity deserve a reward. However, the American consumer would be much better served with a variety of manufacturers building equipment according to standard specifications as exist, for example, for color television. In that way, the consumer will benefit from low prices and uniform quality of service. In fact, color television is a good example. The Australians are fond of telling me that "you did it first, but we did it right."

What I am saying is that, the home earth station industry, and the earth station consumer are the guinea pigs for a system that may not be the ultimate or proper universal system for the universal decoding I described earlier. I do not mean to say that the many features of the M/A-Com system are inappropriate. An engineer may view these as sophisticated. Some typical family users may find them overly complex, others will not. My point is that there is no real competition in encryption as long as cable is in the driver's seat. It should be noted that there are at least three other standards in use and five available for satellite programming. It looks like cable is protecting itself from satellite with no thought being given to where the communications industry should be 5-10 years from now!

Let us look at what cable's panic has brought to the market.

Add-on decoders for existing earth station owners

The suggested list price for a decoder is $395. This descrambler is being sold to distributors at $325 and the distributors and retailers are supposed to make their profit on the remaining $70. This prices do not include freight from M/A-Com to the distributor and from the distributor to the dealer. In effect, there are hardly any worthwhile margins available for distributors and dealers and therefore, there is little incentive to sell decoders. Now I am not arguing for higher decoder prices, but I am asking you to consider the overall distribution process created by M/A-Com.

Instead of making these decoders available to all distributors and dealers, M/A-Com is making them available only to cable television operators and M/A-Com distributors, thereby restricting their ultimate distribution.

M/A-Com distributors, at least initially, made the decoders available only to dealers that carried the M/A-Com line. Further, few decoders were available at distributors on January 15, 1986, the day HBO scrambled. Few, if any, were in the stores of retailers. While there may be an over supply now, the record will not speak well when demand resumes.

Further, when M/A-Com sent the first shipments of set top decoders, they did so with two different models. Very few, if any, in the industry knew that there would be two different models of the set top decoders, and that one model would be more readily usable with some earth station receivers while the other were usable with different receivers. In late November, M/A-Com notified its distributors that the first units will be available "for use with a limited number of base band receivers only." M/A-Com furnished a list to its distributors of some receivers that were deemed compatible and warned distributors to tell dealers "not to let consumers test VideoCipher II capability with any receivers not on this list." That was the 2000EB model. The 2000E, which interfaces with all receivers and contains what is called the 70 M Hz IF, can best be described as containing a redundant mini-receiver within the descrambler. This is a more expensive item, yet both the 2000EB and the 2000E are being sold at the same price. All of this created widespread confusion in the marketplace.

With respect to the manufacturing of these set-top decoders for the existing market, M/A-Com will not license or permit any receiver manufacturer to manufacture the set-top decoders except, as I understand it, on a limited basis so that the decoders are compatible only with the satellite earth station receiver manufactured by the company that wishes to produce the set-top decoder. In other words, if my company wanted to manufacture set-top decoders, I could not make them from scratch. I would have to buy printed circuit (PC) boards from M/A-Com and then could only make them interface with the receivers that my company manufactures and nobody else's receivers. Thus, it is unlikely that there will be real competition created to the $395 price set by M/A-Com.

Integrated receiver/decoders

For new systems, M/A-Com has offered to allow receiver manufacturers such as my company, to buy a board that is approximately 8" by 10" in size that can be included in the receiver. This board would cost $150 from M/A-Com. The problem with the board is that is is so large and consumes so much power that it is really a matter of designing a receiver to fit the board. It would be similar to having Libby Owens Ford design a new oversized windshield and tell all car manufacturers to redesign their cars. For decoders to be commercially acceptable in the long run they must be integrated into satellite television receivers. Further, if there are multiple standards having some degree of compatibility, the decoder chip sets must be small enough to allow each satellite television receiver to accommodate as many as needed.

Getting back to the PC board, M/A-Com is also willing to license others to manufacture this PC board so there will be "competition" to M/A-Com. But the license fee is $1 million up front plus a percentage of the income from all boards manufactured in the future. It is my understanding that only one manufacturer has agreed to these licensing terms. The marketplace is saying that the terms are onerous for small industry such as ours, composed of many relatively small manufacturers. It is my opinion that several earth station receiver manufacturers would be willing to try to make the price of the boards come down and hence the cost of decoding, if the up front licensing fee did not exist or was more reasonable.

The consumers of this country can best be served with a low-cost decoding apparatus. This will happen only when one of two things occur. That is, government sets a standard or there is a cooperative standard agreed upon between the cable industry, the program industry and the earth station industry. Under the auspices of the Congress and the Department of Justice, I think such discussion could be had and could be fruitful. It would result in a uniform standard (perhaps the M/A-Com standard) which many manufacturers could build. The standard should apply throughout the television receiving industry, whether it be a cable subscriber, MDS, SMATV or a home earth station user. Instead of an inadequate response to panic in the cable industry; the result would be widespread, high-volume market in decoders resulting in low cost decoding available through volume sales. With respect to M/A-Com's present equipment, it is imperative to get to a generation beyond the PC board, that is chip sets or low-cost modules that could be plugged into existing receivers as well as future receivers to make scrambling truly affordable. Reasonable licensing terms and conditions are essential and an important first step.

CONCLUSION

The expansion of home satellite earth stations is making universal television programming of choice a reality for millions of Americans. Continued access to network, independent and other programming, is essential to continued development of satellite to home communications.

Home satellite earth stations are also bringing competition to the marketplace. Seeing this growing competition, the newly deregulated cable television industry is attempting to ensure that if it cannot stop technology, it can, at least control it through manipulation of programming services. The challenges for Congress will be to ensure that the newly unleashed cable industry is not permitted to unfairly control its newest, and in many cases its only, competition. For, without meaningful competition in the provision of satellite communications services to the home, the consumer will suffer through inflated costs and reduced service. We urge Congress to immediately address these issues. Time is rapidly running out for thousands of home earth station dealers who are being forced out of the market by anti-competitive and anti-consumer actions. Legislation is needed now to protect the consumer and we pledge our support for its passage.

The CHAIRMAN. Thank you, Mr. Howard.

Mr. Burke.

Mr. BURKE. Mr. Chairman, members of the committee:

I am a satellite dealer. I have been a satellite dealer since 1979, and I have seen the rise of the satellite industry from nothing to a very viable and multimillion-dollar industry. And I have seen the fall of the satellite industry.

In the last 7 months, I have seen my cohorts in the satellite industry, the dealers, decimated by as high as 80 percent business failures in different parts of the country, in some instances even more than that. The failure rate of the satellite dealer and the frustration of the dish owner, and when you put that together with the confusion of the general public, is a direct result of an orchestrated conspiracy to decimate the satellite dealer, the independent dealer, and affect a takeover.

And this is orchestrated by the cable industry to effect this takeover, and thereby extend the monopoly into areas that they never plan to serve.

Americans cannot understand why those in positions of authority would do nothing about these violations of first amendment rights. And these are the questions that they have asked: Why technology researched and developed with taxpayers' money can be turned over to large conglomerates who deny access to the very people who paid for it? Why would advertiser-supported signals from superchannels and other programmers choose to scramble and decrease the viewing audience for the advertisers, and why would the advertiser allow this? And how can licensed networks legally deny free flow of information to all Americans?

It was a gift of our forefathers that gave the privilege to inform and entertain us, and how can we justify scrambling Armed Forces? Has not the blood of the fallen comrades we have had in the field out there paid for this forever?

Why is the so-called M/A-Com decoder alluded to as the standard when it is unreliable and priced out of proportion to the manufacturing cost and distribution? And why does the so-called premium programmers have dual pricing; one for cable and a higher price for TVRO?

The TVRO industry has fought a gallant, but so far futile, battle in the House. Tons of evidence has been introduced, and we now turn to you, our elected Senators, for some emergency relief. And as a last-ditch stand, we, the satellite dealers, the survivors of this holocaust, decimated by 75 to 80 percent, whose needs, along with the consumer dish owner, our needs are mutual by association, we have formed the Satellite Dealer Co-op to solicit basic programming services.

We are going to offer to purchase in large volumes and pay annual premiums in advance to these programmers. Not the premium programmers that have the high costs, but the basic encryption programmers, which would be a dealer survival kit because we need help now. If we do not get help within the next 6 weeks or so, we will be half again gone.

It would be very difficult to understand how any programmer could refuse such a lucrative offer. Basic services are the 14 of 17 advertiser-supported programmers who have announced plans to scramble over the next 12 months beginning back in March. They are prolonging the issue and further burying the satellite dealer, because the delay is just as effective as an inability to have access to the programming.

The dealers are willing to assist in selling, servicing, and maintaining a reliable standard decoder. We only wish to purchase it in quantity, wholesale lots. Without Federal regulation, the cable companies, abetted by the greed and self-interest of sports promoters, entertainment industry, the National Association of Broadcasters, and television program producers using religious beliefs to sell their wares, will control the home satellite market and the minds of the American public.

I wish to thank Senator Trible, Senator Gore, and Senator Ford for their concern over the armed forces' scrambling issues. This concern is a bipartisan action and we embellish that.

Collectively, the entire industry wishes to recognize the courage of Senator Bumpers of Arkansas, Senator Ford of Kentucky, and Senator Gore of Tennessee for introducing legislation recognizing this new technology. Passage of this legislation will ensure the constitutional rights of all Americans to a continuing free flow of information, as was envisioned by our Founding Fathers.

Thank you.

[The statement follows:]

STATEMENT OF TOM BURKE, PRESIDENT, NATIONAL SATELLITE ALLIANCE

Mr. Chairman, my name is Tom Burke. I am a T.V.R.O. satellite dealer in Jacksonville, Ark. I am a veteran of the Korean Conflict, a member of the V.F.W., and Founder and President of the National Satellite Alliance.

There were less than 25 dealers in the U.S. when I started selling satellite systems. I consider myself and a few others as pioneers in the backyard dish industry, and feel qualified to testify to this committee about the issues now confronting everyone.

When I began installing systems the cost was near five times the present, and the programming available was five times less than present—yet the rural citizens purchased them because it was their video door to the world. Many of the ranchers and farmers did not have a T.V. set because they had no access to T.V. signals.

As the demand for this technology grew, some of the dealers went into manufacturing and distribution. We field tested equipment for them and the industry grew because of demand. The satellite dealers became competitive and distribution and manufacturing became commonplace.

When it became apparent that the T.V.R.O. industry was here to stay, large corporations came into the fray—manufacturing in quantity and driving prices down.

Beginning in 1981, we knew that scrambling was inevitable, and we attempted to pay for the use of a premium channel in hotels, motels, etc.—but the programmers refused to accept or negotiate anything—many of these motels were not in a cable service area, and this was their only option. Thus came the term of "theft of signal" for commercial purposes. Yet in those years, H.B.O. did approve some Holiday Inns to utilize their service as a teaser to get tourists to go home and demand H.B.O. on their cable system.

When H.B.O. decided to definitely scramble, it was to force the cable companies to pay. H.B.O. knew that many cable companies were commercializing there signal and not paying for it.

As satellite system prices fell below $3000.00, city dwellers began to have an option to cable—by a satellite dish.

The cable industry, now aware that they were dinosaurs in a high tech T.V. world, made a deal with H.B.O. and a few manufacturers of satellite equipment to put the T.V.R.O. dealer out of business—and take over the industry—not only maintaining their monopoly, but extending it into the rural areas which they had never served.

How to accomplish this? Scramble the satellite signals! How to do it effectively? With the media owning the majority of the cable companies, this conspiracy was made:

(1) Promote the slogan "The Skies Are Growing Dark" and continue this by scrambling signals from the satellites over a period of 18 months or so. H.B.O. and Cinemax in Jan '86, W.O.R. In March '86, Movie Channel and Showtime in June '86, C.N.N. and Headline News in July '86, and so on until the public is convinced that the backyard dish is obsolete.

(2) Deny reasonable access to scrambled signals, and allow access only through the MaCom decoder, H.B.O., and the cable companies.

(3) Offer packages through cable conglomerates in an attempt to convince legislators that the marketplace will work it out.

(4) When the independent satellite dealer is destroyed, the cable companies will sell or lease dishes and decoders and price programming as they choose!

Thousands of dealers have gone out of business because of this conspiracy—thousands of people are unemployed because the industry is declining. Everyday brings another failure, not due to business tactics on the dealers part—due to the confusion generated in the public's mind by the conspiracy.

The satellite dealer who is surviving today is the dealer who has used quality equipment and professional service as a means of staying alive. The rapid decline in T.V.R.O. sales has created thousands of unemployed personnel and thousands of business failures!

I will not burden you further with the reasons for this decline—the reasons are well known and documented by the sub-committee hearings in the House and thousands of written words in trade publications and other reliable sources. We have had two hearings before a sub-committee in the House and each time we were denied any relief—even though it was apparent that action was necessary. The reason for no action there is becoming apparent as time goes on—the power of the cable lobby is fantastic—and we have no effective lobby group because we have no money. Both hearings by the telecommunications sub-committee in the House introduced tons of evidence as to the problem and the cause for it. Despite this evidence, Rep. Tim Wirth of Colorado (Chairman) has not allowed any legislative relief bills to move to mark-up. We are attempting through Rep. Hank Brown of Colorado, to get a discharge petition on HR3989. Senators Bumpers and Ford have introduced S2290—a very similar bill to HR3989. We need relief in some form or we are destined to expire as a competitive industry.

I speak for the surviving dealers and the dish owners. As Chairman of the T.V.R.O. Summitt Conference held in Chicago on June 3, 1986, I represent over 4,000 dealers and at least 440,000 dish owners when we say "We must have help from our elected representatives.".

The cable companies, with a few manufacturers, are orchestrating a "takeover" of our industry. Fearing competition from our high tech distribution they are denying us programming through manipulation of their cable programmers association—thus creating a death to the T.V.R.O. dealers that we know today.

The cable industry is poised to assume our position when the proper time comes. They are now preparing for their emergence as the T.V.R.O. provider of the future.

The enemy (cable) has pressured programmers to scramble and deny access to the dish owners except through cable controlled distribution. This is proven by the ownership of programming packages being offered (T.C.I., etc.).

There has been no provision for rural America to receive these packages.

We, the satellite dealer, are attempting to sell vehicles without proper fuel, or selling plumbing installations without water—no one can survive that type of situation.

Programmers, under pressure to scramble, have refused to deal with the T.V.R.O. industry direct—claiming billing problems and other reasons for refusal.

In a last ditch effort to salvage our businesses, we, the dealers, have banded together in one last stand. We have formed a Satellite Dealers Co-op.

We have contacted the following programmers and made an offering: CNN, ESPN, MTV, NASHVILLE NETWORK, Nickleodeon, USA, VH1, WGN, WOR, WTBS, DISCOVERY, C-SPAN, and CBN. I have attached a sample copy of our offering.

We wish to purchase a compatible decoder and market it with the programming. The MaCom videocipher II decoder has many disadvantages that I believe could be alleviated with the assistance of qualified installers. Presently the pricing and the failure level has prevented the dealers from marketing it. A good warranty and better pricing would be to MaCom's advantage.

In summation, we can provide rural America with programming and serviceable decoders. No other can service these dish owners in a friendly atmosphere.

Refusal by the programmers to sell their programming in large quantities and receive annual premiums would indicate that cable has threatened them with removal from the cable system.

Somewhere in this mass of confusion a solution must present itself. The solution to all the problems will not come easily—but the dealer survival package can be obtained when wholesale distribution by qualified third party distributors is accessible to the T.V.R.O. owner.

We are willing to work for the programmers and market their product, we just want to be able to do it in a fair, equitable, and reasonable manner.

The **Chairman**. Thank you, Mr. Burke.

Mr. Bunker.

Mr. **Bunker**. Chairman Danforth, members of the subcommittee: My name is James F. Bunker. I am a senior vice president of M/A-Com. I want to thank you for this opportunity to appear before you and describe M/A-Com's activities in the area of video scrambling for the last few years. In addition, I want you to know that we oppose S. 1618 and S. 2295 because they would result in unwarranted government intrusion into a vigorous and competitive ongoing marketplace.

In 1982, HBO became the first satellite video programmer to move in the direction of scrambling their video signal by the issuance of a request for proposals. M/A-Com and other telecommunication manufacturers responded to that RFP and M/A-Com won the competition.

The video system is now called VideoCipher II encryption descrambling system. As I am sure you all know by now, all of the satellite video programmers covered by the 1982 Cable Communication Act have chosen the M/A-Com VideoCipher descrambling system for their program. And I am very happy to tell you that this is American technology that these programmers are using.

A single de facto standard has been adopted by the marketplace. Consumers do not need to order or buy more than one descrambler if they wish to subscribe to multiprogramming services.

In answer to the comments made earlier about multiple descramblers for multiple TV sets, if a consumer has multiple satellite receivers, you need multiple descramblers, but one satellite receiver and one descrambler will feed several TV sets. It is a function of the satellite receivers, not of the TV sets.

M/A-Com is not in a position to charge monopoly prices for the descramblers. One aspect of our contracts, planned years ago, was to permit second-source manufacturers to compete with M/A-Com. Channel Master, a division of Avnet, has become a second-source manufacturer, signed agreements, and will be manufacturing units in competition with us toward the end of this year.

We invite other people, like Mr. Howard's company, if he can build the unit much cheaper and wishes a license, to negotiate with us and determine his future in that.

We also have agreed not to raise prices of the unit. The price was set years ago and we are honoring our contract with the programmers. We have diligently worked to develop a rapport and efforts with the home TVRO receiver manufacturers, including a large meeting over a year and a half ago to explain to them the workings and understanding of the VideoCipher system itself.

There are several home TVRO receiver manufacturers who are now purchasing the receiver module and will be entering new products in the marketplace this fall, which will lower the cost to potential subscribers.

Among the terms of the contracts with Showtime and HBO 2 years ago was that M/A-Com would have to make a commitment to a large quantity of descramblers available prior to the market demand, and this is a sunk cost which we have accomplished at a manufacturing rate of 275,000 units.

Yes, we have built 92,000 units, shipped about 80,000 units, and American consumer subscribers have purchased slightly over 25,000 units. There are about 60,000 units in the distribution pipeline for consumers to get at very quick notice.

Descramblers are readily available to TVRO dealers and retailers. We have noticed in the last few months that most of the units we are shipping are going to home TVRO dealers and retailers, and they have been the most viable force in the distribution of video descramblers.

However, to ensure a larger or wider range of availability, we have a private labeling agreement with Channel Master division of Avnet and Anixter—Anixter is a large corporation—and an 800 number which American consumers can call directly and order for M/A-Com if there is not a local retail distributor.

The home TVRO market has slowed considerably in the recent months, due to all the misinformation and confusion that was generated approximately 1 year ago, not just since January, and we, too, have been hurt by the downturn in sales. We are a supplier of home TVRO equipment.

To help stem some of the confusion, we instituted a M/A-Com scrambling channel on the Westar satellite back in March of this year, and have gone to great lengths to let the American public and consumer know the status of scrambling, programmers, and where to receive units from distributors.

The legislation now pending before Congress would interfere with the working of the marketplace. It would hurt M/A-Com, it would hurt satellite programmers, retail distributors, by upsetting what is going on in the marketplace.

We are well ahead of our business plan in the shipment and orders we received for descramblers. Our business plan expected that large quantities would be demanded or required in the fall of 1986 and early 1987. So from a business point of view, a corporation which has a huge sunk cost in descramblers because of our prior commitments, we are basically ahead of the business plan in the shipment of these consumer decoders.

Thank you very much. We would be willing to answer questions at this time.

[The statement follows:]

STATEMENT OF JAMES F. BUNKER, SENIOR VICE PRESIDENT, M/A-COM, INC.

Chairman Danforth and members of the committee, my name is James F. Bunker and I am Senior Vice President of M/A-COM, Inc. I want to thank you for this opportunity to appear before you and describe M/A-COM's activities over the past several years in the field of video scrambling. In addition, I want you to know that we oppose S. 1618 and S. 2990, because they would result in unwarranted government intrusions into a vigorous and competitive marketplace.

M/A-COM is a major supplier of components, equipment and systems for commercial telecommunications and defense applications. Through our operating companies, we are a leading supplier of digital information processing and transmission equipment for satellite communications, data communications, fiber optics, television broadcast and CATV. We are the producer of the broadest range of microwave components for manufacturers of equipment used in the defense and commercial telecommunications market.

One of the main reasons that M/A-COM entered satellite video scrambling is that we are a leading producer of data encryption equipment for both commercial and national security applications. In addition, through our Cable/Home Group, we manufacture antennas for satellite earth stations, and also sell commercial and home satellite receivers. Thus, our participation in these areas provided a natural fit when the marketplace requirement for satellite video scrambling arose. This statement describes in more detail our participation in that market.

THE SATELLITE VIDEO MARKET

First, I want to point out that the satellite video marketplace is extremely complex, perhaps more complex than any other discrete marketplace within the grand category of telecommunications over which this committee has jurisdiction. Here is a list of the most important players in the satellite video marketplace:

Program producers (e.g., Hollywood studios); program packagers/syndicators (e.g., HBO, Showtime); cable TV operators; cable TV subscribers; home TV receive-only earth station (HTVRO) manufacturers; HTVRO wholesalers/distributors; HTVRO retailers; HTVRO owners; TV set manufacturers; commercial TV networks; trade associations (e.g., NCTA, SPACE); domestic satellite owners/operators; Federal Communications Commission; and, Congress of the United States.

When the Congress passed the 1984 cable TV legislation, some members of Congress felt that the public interest would be best served if satellite video programmers would provide service to the owners of HTVRO earth stations, employing scrambling as a way to protect access to the signals. My point in listing these players is to show that there are many competing interests, and that it has been a slow and difficult task to reach the marketplace accommodations that were necessary to let satellite video scrambling proceed. However, it is now going forward, and it is proceeding in a manner that does serve the public interest.

This marketplace is vigorously competitive. What we have seen, and continue to see, is the normal working of a competitive marketplace. M/A-COM believes that the free marketplace, free from government control, usually produces the best products and services at lowest costs for the American consumer. We oppose S. 1618 and S. 2990 because those bills would interfere with the free working of the marketplace and would penalize American consumers.

At this time satellite video scrambling is going forward, and we feel that the overall system concept is in the best interest of the consumer and the other parties with a significant interest. M/A-COM is proud to have participated in formulating that system concept.

HISTORICAL REVIEW

To describe where we are today, it is necessary to review the development of the satellite video distribution industry over the last decade. Starting in the 1970s, Home Box Office and other program syndicators began distributing packages of movies and other entertainment to CATV systems using point-to-point terrestrial microwave. This use of point-to-point microwave relays gave complete control over access to the signals.

Later in the 1970s, HBO took the lead in the industry because it was the first to recognize that domestic satellites could be used to distribute video to a wider range of CATV affiliates at a lower cost than terrestrial microwave. In the 1970s, receive-only earth stations cost upwards of $100,000, so that economic considerations resulted in nearly the same degree of control over access to the signal as had been the case with point-to-point microwave. The earth stations were simply too expensive to be owned by large numbers of consumers.

In the early 1980s, however, the trend to lower cost earth stations was becoming clear. As satellites were launched with higher power and the receiver technology matured, thousands and then tens of thousands of earth stations were sold to commercial establishments and private consumers.

It was at this point that HBO and other satellite programmers became concerned about limiting access to their signals, particularly with respect to the commercial establishments. Some of these programmers felt that their signals were protected from unauthorized private viewing by Section 605 of the Communications Act, since they were not using the satellites to "broadcast" but rather to distribute their signals to discrete locations. However, they also felt that it would be difficult, expensive and perhaps politically impossible to try to enforce the protection of intellectual property rights guaranteed by Section 605 with respect to private HTVRO owners.

Consequently, to a large extent the interest in satellite video scrambling was an economically-driven technological alternative to court enforcement of intellectual property rights. I want to stress the influence of economics in the decision processes, because economics has continued to play a very influential role as the scrambling system design evolved.

In 1982, HBO became the first satellite video programmer to move in the direction of video scrambling by releasing a Request for Proposals for a video scrambling system. M/A-COM and other telecommunications equipment manufacturers responded to this competitive RFP, and M/A-COM won the competition. The winning design included digital encryption of the audio, very secure digital processing of the video signal, and an array of administrative features that were necessary for the commercial aspects of the system. Among the administrative features were the ability to directly address and authorize individual descramblers. This system is now known as VideoCipher® I.

However, during 1983, as we went from the design stage to the prototype and preproduction stage, it became clear that the VideoCipher® I design was too expensive for delivery to a consumer market in the 1985 time frame, because of the extensive digital processing of the video signal. This made it unacceptable to HBO, because by 1983 HBO had apparently decided that the consumer market was important and could not be ignored.

Consequently, M/A-COM redesigned the system so that it could be produced at substantially lower cost. This new system design, now known as VideoCipher® II, retains the digital encryption of the audio but substitutes a somewhat less secure but lower cost analog scrambling technique for the video.

In addition, during this period the administrative capabilities were enhanced so that competing program suppliers could use our system and the consumer would only need to buy a single descrambler. We felt, and we continue to feel, that this is an important feature of our system. We do not believe that the public interest would be served by the adoption of several incompatible scrambling techniques that would require consumers to buy several different pieces of hardware if they wanted to to subscribe to several different program suppliers. We did not want a situation to arise that was similar to the VHS-Beta incompatibility in the video recorder market, so we designed our system to accommodate all programmers that wanted to scramble their signals. In this way, competition between programmers will occur in the programming marketplace, and it will not be distorted by limitations designed into the hardware.

By March of 1984, the VideoCipher® II system design was virtually completed, and in October we released the preliminary interface specifications, first to HBO and then to HTVRO manufacturers. Since the descrambler must be connected between the indoor HTVRO receiver and the TV set, it was important both for the

HTVRO manufacturers to understand the electrical specifications of our descrambler and for us to understand the electrical specifications of their receivers.

We had hoped that the receiver manufacturers would supply us with information about their units, but when this did not occur we went out to retailers and purchased them. Between M/A-COM and HBO, we purchased and tested over thirty different HTVRO receivers to test for compatibility. Our initial design goal was to make our descrambler compatible with over fifty percent of the HTVRO receivers on the market. Later, at the programmers' urging, we changed this goal to ninety percent compatibility and we revised our design accordingly. These design revisions resulted in a decoder that was somewhat more expensive, but the public interest gains from increased compatibility outweigh the increased cost.

Throughout 1984, we were continuing to discuss video scrambling with other satellite video programmers, but no other programmers were willing to make a commitment to scramble at that time. Moreover, several of our competitors were actively marketing video scrambling systems that were incompatible with our design.

Finally, in November 1984 we signed a contract to provide scrambling and descrambling equipment to Show/The Movie Channel. This decision was the next important step that eventually led to adoption of the VideoCipher® II as the de facto industry standard. However, our competitors continued to try to market their systems to the undecided programmers. The majority of the programmers held back on their decision to scramble and choice of a scrambling system until the second half of 1985.

In October 1984, we began delivery of the uplink scrambling equipment to HBO and by March 1985 we had completed delivery of cable headend descramblers to the cable TV systems that were affiliates of HBO. HBO began testing the system gradually, initially scrambling a few hours of programming per week. By late 1985, as much as half of the HBO programming was being scrambled on a test basis.

During this testing program, we carefully monitored the reliability of the descramblers. By October 1985, over 46 million operational hours had been logged, with a mean time between failures of over 93 thousand hours, or about ten years. These descramblers are highly reliable, and the consumer descramblers are similarly reliable because much of the circuitry is identical.

Meanwhile, our efforts to work cooperatively with the HTVRO manufacturers continued. In March 1985, we hosted a meeting of over thirty HTVRO manufacturers where we explained the VideoCipher® II in great detail. We spent time describing the interface specifications for the VideoCipher® II descrambler that is intended to retrofit existing HTVRO installations.

We also described in detail the specifications of the VideoCipher® II circuit module that is designed to fit into the next generation of HTVRO receivers. Starting late this year, the next generation of HTVRO receivers will be available that will incorporate the VideoCipher® II circuitry as a plug-in module comparable to a videotape cartridge. This will result in lower total cost to consumers and higher reliability.

Under the terms of our contracts with HBO and Showtime, we are committed to distribute our VideoCipher® II technology as widely as possible and make it available in modular form to fit into the HTVRO receivers made by other manufacturers. We are committed to making the technology widely available. Another aspect of our contracts, which I will discuss in more detail later, requires us to license second-source manufacturers of the descrambler modules.

During 1985, several additional events of note occurred. In May, we announced plans to operate the authorization computer center for the system on a non-profit basis. This computer center will receive the subscriber authorization information from each programmer, merge the information into a single data stream, and return that data stream to each programmer. In this way, a subscriber needs only to tune to any of the scrambled channels in order to be authorized to watch all that he has subscribed to.

This is a key public interest point the needs additional explanation. The system could have been designed so that each video signal would carry its own authorization informaton, but only its own. In this case, a subscriber would have to tune to each signal sometime during the month in order to receive the authorization for the next month. It is possible to conceive of a situation where a viewer find nothing of interest on a particular program service during some particular month, so never tunes to that service and never receives the authorization information for the next month. If this were to occur, the viewer would be inconvenienced by having to make a telephone call to the programmer to have a special authorization message sent. Our system design avoids that inconvenience.

Also in May, HBO announced that it would use the services of this authorization center. Our system is designed so that a programmer could, if it wished, operate its own authorization computer center separately from other programmers. However, our view was that consumers would be best served by the operation of a single authorization center in which all programmers participate. We are pleased to report that all of the programmers that have decided to scramble with the VideoCipher® II system have chosen also to participate in the single authorization center. That computer has been up and operating since January, at our facility in San Diego.

In the summer of 1985, we announced that we were ready to accept orders for consumer descramblers from wholesalers, distributors and HTVRO manufacturers. The initial order came from Channel Master, which is marketing a private label version of the descramble.

Also in the summer of 1985, RCA endorsed the VideoCipher® II system. RCA's decision was largely based on the direct compatibility of VideoCipher® II with the 150 million TV sets now in American homes. VideoCipher® II uses a signal format known as NTSC, which stands for National Television Standards Committee; this is the industry committee that proposed the current TV format many years ago. In making this endorsement, RCA rejected the alternative scrambling system based on a MAC (Multiplexed Analog Components) format.

During the September and October time frame, a large number of programmers made decisions to scramble using M/A-COM's VideoCipher® II system. First, Showtime announced firm plans to begin offering scrambled programming to HTVRO owners. Showtime also announced that it would particpate in the use of the authorization center that M/A-COM is operating.

Then, Turner Broadcasting—Cable News Network and CNN Headline News—announced plans to scramble and use the authorization center. Since then, most of the other programmers—Disney, MTV, VH1, Nickelodeon, USA Network, and several new pay-per-view operators—also announced plans to scramble during 1986, using VideoCipher® II technology and the authorization center in San Diego.

On January 15, 1986, HBO began scrambling all of its satellite feeds full time. This major event went off without a hitch. Although there was some press coverage of the event, it went largely unremarked outside the satellite video world.

Then, on May 27, Showtime/The Movie Channel began full-time scrambling. This event was accompanied by a press conference organized by SPACE, the Satellite Television Industry Association, to underscore the availability of diverse satellite programming and demonstrate the easy operation of the scrambling system. Finally, on July 1, Turner Broadcasting began full-time scrambling of Cable News Network and CNN Headline News.

With that as a historical review of the events that led us to where we are today, I now want to go over M/A-COM's equipment manufacturing and distributing plans in more detail.

STATUS AND AVAILABILITY OF M/A-COM DESCRAMBLING EQUIPMENT

One of the major concerns that had been raised as we approached the January 15 start date for full time scrambling by HBO was the availability of descramblers. In late 1984 and early 1985, we had shipped some 10,000 descramblers to CATV headends for testing of the system, but there were concerns raised by dealers and consumers that we would not be able to meet the demand for consumer descramblers.

Among the terms of our contracts with HBO and Showtime was a commitment to have an adequate number of descrambles available for sale to consumers as the demand developed. We promised to have 250,000 decoders built and available by the end of 1986. We purchased the parts for these last year and are well underway in production.

There are plenty of VideoCipher® II descramblers available for immediate sale and delivery to the public, and have been ever since January when scrambling began. As of July 21, we have manufactured more than 80,000 consumer descramblers. Of these, more than 50,000 are available in inventory. That inventory resides partly in M/A-COM warehouses, partly on the shelves of distributors such as Channel Master and Anixter, and partly on the shelves of retail dealers. There are plenty of descramblers readily available to consumers.

We constructed a manufacturing center in Puerto Rico during 1985 in order to meet these levels and more. Our plant in Puerto Rico can produce more than 40,000 descramblers a month if demand develops to that level.

In addition, we have the capability and parts to produce up to 100,000 VideoCipher® II circuit modules for installation in the next generation of HTVRO receivers. We have begun manufacturing these and can have the entire 100,000 available for delivery later this year. We are awaiting orders from the receiver manufacturers to begin delivery of these modules.

M/A-COM's VideoCipher® II descramblers are widely available through retailers of home TVRO equipment throughout the country, and also through some CATV operators. We established a direct sale program so that any consumers who are unable to locate descramblers can call us directly to order one. Channel Master and Anixter have similar programs. We want to make it clear that we are committed to distributing these units as widely as possible, so that consumers should have no problem in finding and purchasing them.

Another concern that some had raised was M/A-COM's ability to charge monopoly prices for the descramblers. M/A-COM is *not* in a position to exercise monopoly control of the VideoCipher® II technology. One aspect of our contracts with the programmers requires us to license second-source manufacturers of the descrambler modules. We have entered into negotiations with several electronics manufacturers and at this time we have reached agreements with one second-source manufacturer.

This simply illustrates the normal workings of the competitive marketplace where proprietary technical standards are involved. By requiring these contractual commitments, the program suppliers were careful to deprive us of monopoly control over the technology. They knew that they would be at an economic disadvantage if VideoCipher® II became a de facto industry standard and M/A-COM retained complete control over the manufacture and distribution of the scrambling hardware, so they did not allow it to happen. The result is that a wide variety of HTVRO receivers will incorporate the VideoCipher® II descrambling module, and that module itself will be competitively produced by multiple manufacturers.

That result will benefit American consumers in the form of lower equipment prices. The retrofit unit now available in the market has a suggested retail price of $395. The module, when it is incorporated into HTVRO receivers, should result in a price increase of only about $175 over receivers without the module. As the technology evolves so that more functions are concentrated in fewer integrated circuit chips, the price may go even lower. Moreover, based on our understanding of the marketing plans of programmers and their sales affiliates, we expect the monthly charges for programming to be quite reasonable.

CONSUMER PERCEPTION AND THE CURRENT STATE OF THE MARKET

As you may have read earlier this year, the HTVRO market slowed considerably. HTVRO sales are down substantially from last year. While this happened in part due to bad weather and in part due to the beginning of fulltime scrambling by HBO, we believe that the major reason for this market downturn was consumer confusion.

If the home TVRO industry spoke with a single clear voice, consumers would understand that scramblers has begun in an orderly fashion. They would understand that descramblers are widely available. They would understand that they need only a single decoder to unscramble all of the scrambled programming. They would understand that the programming will be available at a fair price.

But there are still voices in the marketplace that circulate misleading information and encourage consumer confusion. For example, some have recently complained about a purported limitation in the VideoCipher® II system that forces the consumer to purchase a separate decoder for each TV set. To the contrary, it is the home TVRO receiver that imposes this limitation, and the design was accepted by consumers long before scrambling was ever contemplated.

The home TVRO receiver, which normally sits on top of the TV set, takes the 24 video channels that come into the home from the outside dish, and selects one channel for display on the TV set. For scrambled channels, the decoder is connected in the circuit between the home TVRO receiver and the TV set. The decoder unscrambers only a single channel because the home TVRO receiver only puts out put one channel. In order to feed several TV sets with different channels, it is necessary for the consumer to purchase several home TVRO receivers, and then install one decoder for each home TVRO receiver.

If any manufacturer decides to produce a home TVRO receiver that puts out two different channels, than M/A-COM will consider designing a decoder that descramblers two channels. There are no inherent technical problems, but we are not aware of any home TVRO receiver of this type.

I want to stress that this is not a limitation of the decoder, because it results from the HTVRO receiver design. Moreover, it is nearly identical to the situation in CATV systems. There, a separate set-top converter is needed for each TV set. Yet some in our industry have implied that the decoder design if faulty. This is typical of the misinformation about the scrambling system that has been generated. This misinformation simply confuses the public.

M/A-COM is doing its part to try to stem consumer confusion so that this industry can develop in the way the Congress intended. We established a Scrambling Information Channel on one of the Westar satellites to inform dealers and consumers about scrambling timetables and the installation, operation and availability of descramblers.

Our Scrambling Information Channel reviews the scrambling plans of each of the programmers. It carries up-to-date information on the availability of descramblers. It provides step-by-step installation instructions and describe the scrambling system features. The M/A-COM Scrambling Information Channel began operation in early March 1986 with three hours of unscrambled prime time programming.

The industry does not benefit from consumer confusion. M/A-COM does not benefit. The consumers do not benefit. We hope to dispel the misinformation that has been spread by the strident voices of our industry, in order to eliminate consumer confusion and re-establish the HTVRO industry in its rightful role in the video distribution marketplace.

SUMMARY AND CONCLUSION

All of the satellite video programmers who have chosen a scrambling system have chosen the VideoCipher® II system. As a result, consumers will not need to purchase multiple descramblers if they want to subscribe to multiple programming services.

The descrambler hardware is now available and will continue to be available from a wide variety of retail sources. The compatibility of the VideoCipher ® II module with the next generation of HTVRO receivers, coupled with the competitive second-source manufacturing of those modules, will assure that equipment prices are reasonable.

It is in M/A-COM's best interest to seek the widest market possible for these descramblers. We believe that it is in the best interest of satellite video programmers to market their programming to HTVRO owners at reasonable prices in order to maximize their revenues and profits. This is the way the free enterprise system has worked throughout the history of our country, and it has worked to the benefit of the American consumer.

The legislation now pending before the Congress would interfere with the working of that marketplace. It would hurt M/A-COM, it would hurt the satellite video programmers, and in the long run it would deprive HTVRO owners of the programming that they are willing to pay a reasonable price to receive today.

I thank you for the opportunity to appear before you, and I would be pleased to answer any questions you might have.

[The following information was subsequently received for the record:]

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC, August 27, 1986.

Mr. JAMES F. BUNKER,
Senior Vice President, Corporate Marketing, M/A COM, Inc.,
Burlington, MA.

DEAR MR. BUNKER: Enclosed are additional questions relating to the July 31 Senate hearing on the issue Satellite Television Signal Scrambling.

I would appreciate your response to these questions. The questions, correspondence, and your reply will all be made part of the hearing record.

Should you have any questions or need further clarification regarding the enclosed, please feel free to contact my office.

Sincerely,

LARRY PRESSLER,
U.S. Senator.

Enclosures.

QUESTIONS OF SENATOR PRESSLER TO M/A COM

1. I am told that the decription module sold for internal use in satellite receivers could be built as a stand-alone unit (before the addition of a power supply which could be obtained for approximately $10) for roughly $65. In addition, I am told that the model you offer for roughly $400 contains many "frill" accessories such as teletext, on screen graphics, tuner control key, etc., which are either largely unutilized

or a duplication of existing homeowner equipment already built into the satellite receiver.

Could you respond to these statements telling me if they are substantially true? And, understanding that there are some customers who may prefer the more expensive model, why is it not possible to offer consumers the option of a simplified, less expensive model?

Is it technically feasible to build today a less expensive decription module which could provide the same uniform decription function for basic TV channel descrambling as does the $395 model?

Frankly, I am told that the higher priced model selection was made for the purpose of inhibiting the TVRO industry? Please respond to that charge.

2. Enclosed is a very thoughtful and detailed letter from one of my constituents, Mr. Don Lefevre of Anderson Scientific, Inc. in Rapid City, raising questions regarding the suitability of the M/A COM system as a consumer descrambler. Could you please respond to all of the issues raised in that letter, particularly those regarding the necessity of staying tuned to a scrambled channel in order to receive authorization, and the difficulties with small dishes.

ANDERSON
SCIENTIFIC
2693 Commerce Road Rapid City, SD 57702
(605) 341-3781 Telex: 257631 ANSI

August 26, 1986

The Honorable Larry Pressler
United States Senate
Washington, DC

Dear Senator Pressler:

This letter is to bring to your attention a potentially serious problem with the Satellite Television Scrambling System made by M/A-COM Corporation. This system is being considered a de-facto standard for scrambling; but I feel that there are weaknesses in the system which have not yet been addressed in Congressional hearings.

It appears that as the M/A-COM system approaches its capacity of 5 million subscribers, there will be increasing problems with consumers having difficulty getting their descramblers to "authorize" (descramble.) This is due to the fact that the information needed for a descrambler to operate comes down with the satellite television signal. Each descrambler needs to have its own "key" sent to it once a month before it will descramble. When the system is full, each descrambler key will be sent once every 12 days. If the Satellite Receiver is off, or tuned to an unscrambled channel when the key is sent down, it will have to wait for 12 days before the key is re-sent. If the receiver is not on a scrambled channel the second time, the key will be missed again. If the key is not received by the time the new Billing Period begins (usually month-to-month,) then the consumer will be unable to watch scrambled channels until his key rolls around again. This problem is worse when the consumer is using a small dish since his reception is noisier and the descrambler may not correctly understand the key when it arrives. Scrambling is not compatible with small dishes which cost significantly less and are more aesthetically pleasing in a back yard.

An analogy to this situation is this: a person needs to get into a locked room which contains the programs he desires. He has paid to get into the room, and he is listening on the telephone to someone who is reading out the combinations to the all of the locks in the country. The phone line is noisy (this corresponds to a small dish - the smaller the dish the noisier the line.) When the combination to his lock is read over the phone, he attempts to unlock the door. If he misunderstands the combination because of the noisy line, he will be unable to open the lock and he will have to wait until all of the other combinations have been read again before he gets another chance.

When the M/A-COM system is full, there will be 5 million descramblers. Each of these units will have to wait in line for its combination, or key, to come down from the satellite. The keys are valid for one month at a time, so the descrambler must correctly receive a key at least once per month. With 5 million descramblers, it will take TWELVE DAYS to send the complete list of descrambling keys. Since a consumer will not know when his key is coming, he will be forced to stay tuned to a scrambled channel, with everything turned on, for up to 12 full days. Otherwise, he may miss his key when it comes. He will not be able to turn off his receiver or tune to an unscrambled channel, such as C-SPAN, during this time.

Here is a possible scenario: John Public has been watching a scrambled channel. It is the last day of the month, and John decides to watch a Senate Commerce Committee Hearing on C-SPAN. John has just paid his bill for the next month's service and has not yet received his new descrambling key. He tunes to C-SPAN and watches the Hearing at the time when his key happens to be sent down. Since he is not tuned to a scrambled channel, he does not receive the key. The next day (the first day of the new month,) John's descrambler will not work since it did not receive the new key. He must now wait 11 days (for 12 total) before his key is sent again. During these eleven days he will not be able to watch the scrambled channel. He may be able to call and have his key retransmitted, but this provision must be made.

With a full system, each consumer descrambler will have two and one-half chances each month (one every 12 days) to receive its key. When the consumer is using a small dish, more problems will occur since his reception of the descrambling key is noisier and errors are more likely.

There are several satellite television receivers which can produce viewable pictures with a received signal which is only four times stronger than the noise (a 6 decibel carrier-to-noise ratio.) According to a M/A-COM engineer that I spoke with on March 14, 1986, the probability of correctly receiving the descrambling key on one try is 60% for a signal like this. With two and one-half chances each month to receive the key, the probability of not getting the key for the next month is 11.2% in this case. In other words, 11.2% of the time, people with small dishes (6 decibel carrier-to-noise ratio) will miss their authorization for the next month. They will then be unable to receive scrambled signals until they do receive their key correctly. This will happen even if they are properly tuned to a scrambled channel each time their key is sent. Essentially, scrambling is incompatible with small dishes.

The use of small dishes is a serious problem for scrambling. And, the necessity of leaving the satellite television system on and tuned to a scrambled channel virtually all of the time in order to receive descrambling keys is a constraint which will be most unsatisfactory to most consumers.

This makes me wonder if the Videocipher II is not simply a Cable Company Descrambler which has been "consumerised" in order to meet the letter of the law in the Cable Communications Policy Act of 1984 (which allows home reception of satellite television.) It seems that this was done without proper consideration of the performance of the Videocipher II as a consumer descrambler.

Subject to the permission of Anderson Scientific, I would be willing to testify about this information if you so desire.

Sincerely,

Don Lefevre

Don Lefevre
Chief Engineer
Anderson Scientific, Inc.

P.S.: I have included an appendix with the derivation of the Probability of Missed Authorization in case you would like to verify this information. My background includes six and one-half years with the Research Group at Sperry Defense Communications Systems where I was involved in Communications and Coding Theory research.

APPENDIX: DERIVATION OF THE PROBABILITY OF MISSED AUTHORIZATION

1. Single-attempt Probabilities of Authorization, according to M/A-COM information on 3/14/86:

Carrier-to-Noise Ratio, CNR	Bit Error Rate, BER	Prob. of Authorization on 1 try, $P(A\|1)$
9 dB	1×10^{-5}	not given
7 dB	1×10^{-4}	95%
6 dB	1×10^{-3}	60%

2. Probability of Missed Monthly Authorization, P(M)

If there are any successful single authorizations during the month, then the monthly authorization occurs. A missed monthly authorization occurs when each single attempt fails:

$$P(M) = P(m_1)P(m_2)\ldots P(m_n),$$

where n is the number of attempts in a month, and $P(m_i)$ is the probability of missing on the i^{th} attempt. For a month with two attempts:

$$P(M|2 \text{ attempts}) = P(m_1)P(m_2)$$

When the conditions are equal during the two attempts,

$$\begin{aligned} P(M|2 \text{ attempts}) &= P(m)P(m) \\ &= P^2(m) \end{aligned}$$

For a month with three attempts,

$$P(M|3 \text{ attempts}) = P^3(m)$$

The overall Probability of Missed Authorization during an average month is:

$$\begin{aligned} P(M\text{-avg}) = {} & P(2|\text{attempts}) \times P(M|2 \text{ attempts}) \\ & + P(3|\text{attempts}) \times P(M|3 \text{ attempts}) \end{aligned}$$

Since a 12 day interval between attempts results in one-half of the months (taken as 30-day months) having two attempts and one-half of the months having three attempts:

$$P(M\text{-avg}) = 0.5P(M|2 \text{ attempts}) + 0.5P(M|3 \text{ attempts})$$

$$P(M\text{-avg}) = 0.5P^2(m) + 0.5P^3(m) \qquad \text{EQN (1)}$$

P(m), the probability of missed authorization on a single attempt, is:

$$P(m) = 1 - P(\text{authorization} \mid 1 \text{ attempt})$$

Thus, for a 7 dB CNR and

$$P(m) = 1 - 0.95$$

$$= 0.05 \text{ ,}$$

then, from EQN (1):

$$P(M\text{-avg}) = 0.5 \times 0.05^2 + 0.5 \times 0.05^3$$

$$P(M\text{-avg}) = 0.00131$$

Or, P(M-avg) = 0.131% with a CNR of 7 dB.

For a CNR of 6dB:

$$P(m) = 1 - 0.60$$

$$= 0.40$$

And

$$P(M\text{-avg}) = 0.5 \times 0.40^2 + 0.5 \times 0.40^3$$

$$= 0.112$$

Or, P(M-avg) = 11.2% with a CNR of 6 dB.

The table below summarizes this information:

Carrier-to-noise Ratio, CNR	Bit Error Rate, BER	Prob. of Auth. on 1 Try	Prob. of Missed Monthly Authorization
6 dB	1×10^{-3}	60%	11.2%
7 dB	1×10^{-4}	95%	0.13%
9 dB	1×10^{-5}	unknown	-

General Instrument Corp.,
New York, NY, October 9, 1986.

Hon. Larry Pressler,
U.S. Senate, Russell Office Building, Washington, DC.

Dear Senator Pressler: Please accept our apologies for the delay in responding to your August 27 letter requesting response to several questions and charges related to the July 31 Senate hearing. As you will note from the letterhead, the division responsible for M/A-COM's scrambling activity has been sold to General Instrument Corporation, effective September 20, 1986. As Executive Vice President and General Manager of General Instrument's VideoCipher Division, I will respond to the questions presented to Mr. Bunker, who remained with M/A-COM.

The thrust of your questions suggests that you are concerned that the VideoCipher® II video scrambling system may be unreasonably expensive and poorly designed. As this response will show, those concerns are totally unfounded. The system was designed to operate economically and reliably in a consumer environment, and the equipment is priced at a fair and reasonable level.

PRICING OF THE DESCRAMBLER AND DECRYPTION MODULE

The VideoCipher II decorder that sells for $395 was intended as a retrofit unit and designed to be compatible with over 90 percent of the nearly 1.5 million home TVRO receivers now in use. For that reason, it includes components and circuitry that are able to interface properly with a vast and diverse population of different TVRO receivers. There have never been any compatibility standards for TVRO receivers. In order to achieve a high order of compatibility, the VideoCipher II decoder includes special circuitry. The selling price covers the cost of this circuitry.

You ask about "frill" accessories incorporated into the system. The features that have been incorporated into the system are not frills, but have been requested with good reason by the programmers. The parental lockout capability is not a frill, it is essential for the movie marketplace. The addressing by zip codes is not a frill, it is essential for the sports marketplace. The important fact, however, is that these features were designed into the initial specifications and, once the initial product development was completed, these features add very little to the cost of each unit that is being produced.

At this point, introducing a "simplified" model without these features would fragment demand and result in lower volume and thus, higher costs for all.

The M/A-COM testimony talks about the next generation of TVRO receivers. By integrating and decoding capability into next-generation TVRO receivers, special interface circuitry will no longer be needed. The generation of TVRO receivers that will come to the market later this year will contain a built-in module to accomplish the decoding.

The price difference between these two approaches is dramatic. The retrofit decoder has a recommended retail price of $395. In contrast, General Instrument will sell the integrated decoder circuit module to TVRO receiver manufacturers for $150. (Of course, after normal distribution channel markups, the cost to the consumer will be higher.) The difference is due to interface circuitry, plus the separate chassis, power supply and other components needed for the retrofit decoder. These circuits and components will not be needed when the module is built into the home TVRO receiver.

With this background, you can see that it is unfair, both to General Instrument and the 1.5 million dish owners, to claim that the VideoCipher II decoder is too expensive. These dish owners cannot take advantage of the lower cost of built-in decoding modules unless they junk their current receivers. We consciously tried to design the VideoCipher II retrofit decoder so as to minimize total costs for the 1.5 million dish owners and maximize the usefulness of their investment. You cannot ignore their current investment and have them start all over again with the purchase of a totally new receiver.

We emphatically deny that the VideoCipher II system design was deliberately designed with a high price in order to inhibit the TVRO industry. As we have testified, early in the design and development process we rejected the highly-secure VideoCipher I approach because it would have been too expensive to be a consumer product. If our goal were to inhibit the TVRO market, we would have continued development of that product for the backyard TVRO market. We did not, because our goal was to design the best *affordable* consumer system.

FREQUENCY OF AUTHORIZATION MESSAGES

Mr. Lefevre's letter discusses the subscriber authorization process and the operation of the scrambling system in a weak signal environment. These are two theoretical problems that were given detailed consideration in the design process. Mr. Lefevre makes worst-case assumptions about each matter, and then combines them. His letter describes an unrealistic circumstance. It is a red herring.

The question of how often a decoder receives its authorization message was recognized very early as a critical design parameter. It is for this reason that the system was designed around a single central authorization computer. This computer center will receive the subscriber authorization information from each programmer, merge the information into a single data stream, and return that data stream to each programmer. In this way, a subscriber needs only to tune to any of the scrambled channels in order to be authorized to watch all that he has subscribed to.

This is a key public interest point that needs additional explanation. The system could have been designed so that each video signal would carry its own authorization information, but only its own. In this case, a subscriber would have to tune to each signal sometime during the month in order to receive the authorization for the next month. It is possible to conceive of a situation where a viewer finds nothing of interest on a particular program service during some particular month, so never tunes to that service and never receives the authorization information for the next month. If this were to occur, the viewer would be inconvenienced by having to make a telephone call to the programmer to have a special authorization message sent. Our system design avoids that inconvenience.

While Mr. Lefevre's theoretical understanding of this matter is correct, his analysis is marred by several flawed assumptions. He assumes the VideoCipher II system becomes "filled up" at 5 million subscribers. This is incorrect; the VideoCipher II system can handle more than 5 million subscribers. It is also irrelevant, since there are now only 1.5 million dish owners. It will be many years before the subscriber levels reach above 5 million.

Mr. Lefevre's second incorrect assumption is that with 5 million customers, each monthly message is sent "once every twelve days." Mr. Lefevre simply does not fully understand the characteristics and capabilities of the system. First, with 5 million subscribers under current operating conditions, each monthly message is sent every 1½ days, giving each customer 20 opportunities to receive his key for the next month. Second, the amount of bandwidth allocated for the authorization messages can be changed at the central control computer. In this way, even if the subscriber level were to reach over 5 million, the authorization messages could be sent as frequently as necessary by increasing the bandwidth allocated to this message type. Consequently, this portion of Mr. Lefevre's analysis must be rejected.

PERFORMANCE IN A WEAK SIGNAL ENVIRONMENT

The second part of Mr. Lefevre's analysis deals with the recognition of the authorization message in a weak signal environment, namely a 6 decibel carrier-to-noise ratio. His question deals with the compatibility of the VideoCipher II with existing TVRO receivers.

As we discussed above, one of the factors that determines the $395 price of the retrofit decoder is the need for compatibility with 90% of the home TVRO receivers in use. It is the receiver, as much as the dish size, that determines the signal strength and other compatibility factors.

In October 1984, we released the preliminary decoder interface specifications to HTVRO manufacturers, including Anderson Scientific. Since the descrambler must be connected between the indoor HTVRO receiver and the TV set, it was important both for the HTVRO manufacturers to understand the electrical specifications of our descrambler and for us to understand the electrical specifications of their receivers.

We had hoped that the receiver manufacturers would supply us with information about their units, but when this did not occur we went out to retailers and purchased them. Between M/A-COM and HBO, we purchased over 30 different HTVRO receivers to test for compatibility. Our initial design goal was to make our descrambler compatible with over 50 percent of the HTVRO receivers on the market. Later, at the programmers' urging, we changed this goal to 90 percent compatibility and we revised our design accordingly.

We have revealed a substantial amount of information about VideoCipher II design to home TVRO manufacturers including Anderson Scientific. Mr. Lefevre's claim that the VideoCipher II is nothing more than a "Cable Company Descrambler" suggests that he hasn't done his technical homework in comparing our system with those scrambling systems that are used by cable TV systems. Our system is incredibly more complex and sophisticated. It is far more secure. It offers many more features. In short, Mr. Lefevre's suggestion is without merit and must be rejected.

His analysis of the weak signal environment is unrealistic. He has assumed that a carrier-to-noise ratio of 6 decibels is an acceptable standard. That is not correct. At that level, the picture quality is overcome with a type of interference known as "sparklies." It is not an acceptable signal level. For this reason, our VideoCipher II decoders were designed to operate with almost perfect individual message reception at a carrier-to-noise ratio specification of 8.5 decibels.

Even at lower levels, the probability of successful reception of the authorization message is extremely high, due to the multiple opportunities to receive that message, and the effect of error detection and correction that is incorporated into the VideoCipher II system. This error correction increases the correct message reception probability to 99.92% for a raw bit error rate of 10^{-3}. With 20 repetitions of each monthly message for 5 million subscribers, the probability of not correctly receiving at least one repetition of the monthly message is less than 2 x 10^{-62}!

There is another reason that Mr. Lefevre's statements must be rejected. Anderson Scientific has good reason to try to discredit the VideoCipher II system. Earlier this year, Anderson Scientific designed a "pirate" descrambler that it planned to demonstrate at a trade show in February. M/A-COM's attorneys sent Anderson Scientific a letter warning that such behavior was unlawful. Because of our letter, Anderson Scientific chose not to exhibit its "pirate" descrambler at the show and as a result the company was embarrassed in the market. Mr. Lefevre's letter is little more than Anderson Scientific's attempt at revenge for this incident.

CONCLUSION

The VideoCipher II has been designed to be the best available satellite video scrambling for the home TVRO market at a reasonable price. The decoders are priced at a fair level. The cost of decoding will fall dramatically when the next generation of home TVRO receivers have the decoder modules built in. The system was designed to be reliable, and the question of frequency of authorization messages was recognized as an important design criterion.

I hope this reply has been responsive to your needs. Please feel free to request additional information if any other questions should arise.

Sincerely,

J. Lawrence Dunham,
Executive Vice President
and General Manager, VideoCipher Division.

The **Chairman**. Gentlemen, thank you very much. In the earlier exchange between Senator Gore and Secretary Sikes, the question was what percentage of movie service are available that are not descrambled? Do any of you know?

Senator **Gore**. Premium movie channels.

The **Chairman**. Are there not other movie channels that have not yet scrambled? Does anyone know?

Mr. **Mooney**. The primary movie channels are HBO and Showtime and their companion services, Cinemax and Movie Channel. There is also, of course, the Disney Channel, which is the fastest growing premium channel in the market. Disney is not scrambled yet, and there are some other regional movie channels. Select TV, of course, is not a cable programming service, but it is nonetheless a movie channel.

The **Chairman**. There are some movie channels that are not scrambled?

Mr. **Valenti**. Well, there are some on pay per view; some experimentation going on, Senator, with pay per view. That has not scrambled to my knowledge, either, but that is a problem, too.

The **Chairman**. I did not want to dwell on this but I wanted a more factual answer.

Let me ask you this, Mr. Mooney. I think—and correct me if I am wrong—your industry's position, is that what you want is an unregulated monopoly?

Mr. MOONEY. No, sir; that is not correct. That is not correct. You know, Senator, to be candid with the committee, my experience with this issue is that all kinds of misstatements get made. And you know, it is almost like somebody tearing up a feather pillow, and I get a minute or two or five to pick up all the feathers.

Let us go to this question of whether Showtime and HBO are monopolies.

The CHAIRMAN. Let us go to this question. I have run into this in the must-carry issue, which I have gotten involved in now. Your industry does not want to guarantee broadcasters access to cable. You do not want to be regulated as a common carrier.

You do not want competition from the telephone companies. You want exclusive franchises. You want to be able to market HBO to satellite dish owners.

It just seems to me that you truly do want to become—and I do not blame you, but I am not sure that we should do nothing about it—you want to become the gatekeeper to what people can see and what they cannot see, without any degree of regulation and without real competition.

Mr. MOONEY. Senator, may I respond?

The CHAIRMAN. Of course.

Mr. MOONEY. My industry, at the urging of members of this committee and other Members of Congress, after winning hands down in court on must carry, went back and voluntarily entered into an agreement with the National Association of Broadcasters and others of the broadcast trade associations for the reimposition of must carry in a proceeding now pending before the FCC. And we expect that on a week from today must carry will be back in with our consent.

We do not understand ourselves to have legally exclusive franchises and in the Supreme Court of the United States this very year have argued that in our view the first amendment itself prevents exclusive franchising. That is a position on the part of my industry which has been very clear.

As to the question whether these movie services are monopolies, Showtime and HBO are just companies which have been organized to distribute motion pictures to cable television systems. And along comes the dish phenomenon and they look at that and they say, well, we are going to sell it to them, too, but before we do it we are going to have to scramble our signal to make sure that we can get a price for this thing we have which is pay television.

It should be understood that, in addition to that, that there is nothing about Showtime or HBO that gives them exclusive rights to the distribution of anything. We do not own the ultimate rights to the movies. Anybody can put another service up there consisting exclusively of movies. All they have to do is go to Hollywood and make a deal with Mr. Valenti's people, who history has shown, if the price is right, will do deals. Thus, you have the existence of the video cassette business, which gets prior release over the cable movie services.

So, sir, respectfully, I do not think we either have a monopoly in the sale of video programming nor in fact do I think does the record justify the suggestion that my industry in the conduct of its public policy activities has sought to make one.

The CHAIRMAN. Thank you.

I want to thank Senator Stevens for agreeing to chair this hearing for the next half hour or so.

Senator GORE. Mr. Chairman, before you leave, would it be too much to ask for two rounds or more than one round?

The CHAIRMAN. Well, I think the problem is going to be finding somebody to chair this after a while.

Senator GORE. I would be glad to.

The CHAIRMAN. Senator Stevens also has a commitment. We will see if we can work it out.

Senator GORE. I appreciate that, because with the five witnesses on the panel and only 5 minutes, 1 minute per witness is a little tough. But I appreciate your courtesy.

Mr. Mooney, we have been friends a long time. We both used to work over in the House. But we disagree strongly on this issue.

Now, let me ask you this. Let us say that I am a dish owner. I do not happen to be, but let us say I am a dish owner living within an area where a cable company has a franchise, but the cable company has not seen fit to serve the area where I live.

I call up HBO and I say: I would like to buy your signal, and I would like to pay what is the going rate. Now, under the current arrangement HBO turns around and gives $5 per month of what I pay HBO to the cable company, correct?

Mr. MOONEY. I believe that is their marketing arrangement.

Senator GORE. Now, what I want you to tell me——

Mr. MOONEY. The so-called brand utilization discount.

Senator GORE. What I want you to tell me is what is fair about that?

Mr. MOONEY. Well, Senator, I think that you raised the question yesterday in your press conference, what is the cable operator doing for that dish owner. And when I read that I said to myself, I rather think the question is what is that cable operator doing for HBO.

Senator GORE. Well, I think that is part of the answer. Keep going.

Mr. MOONEY. Mr. Fuchs from HBO will be here on the next panel and I think can give you a more authoritative answer on that. But my understanding is that brand utilization discounts in this area, as in other areas, are premised on the notion that the volume distributor, in this instance the cable operator, is performing valuable promotional and other functions to play up the fact to the public that there is such a thing as HBO, and that it offers, and that it is valuable and is worth purchasing.

Senator GORE. Now, wait a minute. With all due respect, I do not quite get the point there. You are saying that it is fair for me as a dish owner to have to pay $5 a month to the cable system because the cable system occasionally puts an ad in the newspaper saying they are offering HBO to their customers? Five dollars a month?

Mr. Mooney. I am saying that for business reasons of its own HBO has apparently decided that it wants to pay what it calls a brand utilization discount to the cable operator.

Senator Gore. I call it a kickback.

Mr. Mooney. I understand that. And the trade association does not have any position as to whether that is the right thing to do or not the right thing to do.

Senator Gore. Do you think that is fair?

Mr. Mooney. Sir, I think it is HBO's affair.

Senator Gore. Do you think it is fair?

Mr. Mooney. I think it is their business.

Senator Gore. Do you think it is fair?

Mr. Mooney. I will tell you, as a political matter, I am not sure that it is smart, but it's not in me to go to the question of whether it is fair. I understand the problem that you, Senator, and other Members of the House and Senate have had with that particular practice.

The only thing I can tell you is that in its business judgment that is what HBO decided to do, and that it is not something unique to this business.

Senator Gore. All right. I think the answer is abundantly obvious to any reasonably objective person. That is unfair.

Let me ask you about another practice and ask you whether this is fair. Let us say that I have a television signal that is totally supported by advertising and I want to get the biggest viewership I can, so I can charge more for my ads.

Most of my customers are on cable systems, but a dish owner comes to me and says: I would like to receive your signal also. And I say: Great, that is fine; you can have it. Then the cable system comes to me and says: Look, if you do not prevent that dish owner from getting the signal, we are going to kick you off our cable systems and you are going to go bankrupt.

Is that fair?

Mr. Mooney. Senator, I do not think if that has ever happened.

Senator Gore. Well, you know about the CBN episode, do you not? Let me read to you, and I would ask unanimous consent to put this letter in the record, Mr. Chairman.

[The material referred to follows:]

THE CHRISTIAN BROADCASTING NETWORK, INC.,
January 20, 1986.

LLOYD P. COVENS,
Editor/Publisher, Channel Guide,
7340 E. Caley Ave., Suite 320, Englewood, CO.

DEAR MR. COVENS: Thank you for your letter of November 22nd.

We have been struggling to keep free of scrambling our signal for over a year. There are about one million households with private satellite dishes and thousands of others are being added every month.

The pay television operators, such as HBO, regard the free viewing of their service as a form of piracy. The cable operators obviously view this as a danger to the billions of dollars they have invested in land lines, etc. There are about 40 million cable households now and the growth of cable is clearly outstripping the predominantly rural home satellite dishes.

So far the DBS concept has not worked out economically and none of the serious players are at present going with it. With dozens of new program services clamoring for cable access, we are at a point where it does not seem prudent to jeopardize 40 million households in order to preserve access to one million households which may indeed be denied service under any circumstances by the other major program suppliers.

It has been the consensus of our executives that the growth and strength of the CBN Cable Network has been the result of the obvious blessing and favor of the Lord, but secondly the carriage of our signals by the total cable industry including the very large multiple system operators throughout the country. Our service has been good for them, but their cooperation has been good for us, despite our strong feeling about open skies and free access. It doesn't make sense at this time to turn our backs on those who over the last eight years have been providing us access to the homes of millions of Americans.

With all good wishes, I am

Cordially yours,

Pat Robertson, *President.*

CBN Cable Network,
Virginia Beach, VA, July 16, 1985.

Charles F. Howard, Jr.,
7020 Yule Lane, Tampa, FL.

Dear Mr. Howard: Thank you so much for your interest in CBN Cable Network, and for taking the time to share your concern over the scrambling issue.

One of the major factors in the scrambling decision is the threat from cable operators to refuse to carry a network's programming if the network decides not to scramble. In other words, for many networks, unscrambled programming could equal no programming at all.

CBN is one of the few cable television networks that provides programming free of charge. It is our desire that our programming be available to all who wish to see it, without any obstacles of finances or scrambling. Currently the scrambling question is still under evaluation by CBN; please know, however, that if we ever do scramble our signal, it will not be at the expense of a subscriber's ability to view the "700 Club" if he so chooses.

Again, thank you for writing, and for watching the CBN Cable Network.

Sincerely,

Jodie Rundle,
Public Liaison Coordinator.

[The following information was subsequently received for the record:]

CBN Cable Network,
Virginia Beach, VA, September 11, 1986.

Hon. John C. Danforth,
U.S. Senator, Russell Senate Office Building,
Washington, DC.

Dear Senator Danforth: In the wake of the rather animated discussions which have been conducted regarding the encryption of satellite delivered television programming, I am afraid a very serious misconception has arisen regarding the position of CBN on the matter. On more than one occasion, a letter has been introduced as evidence that CBN has been coerced into scrambling its signal by cable operators, and I feel that it is clearly time to set the record straight.

The letter, written by our CEO Dr. M. G. "Pat" Robertson in January, 1986, can hardly be used as an example of coercion. He clearly states in the letter that "It doesn't make sense at this point to turn our backs on those (cable operators) who over the last eight years have been providing us access to the homes of millions of Americans." This does not mean that cable operators have coerced CBN into scrambling, rather it is a clear statement that we understand the problems of the cable industry and the need to provide exclusive programming in order for that industry to remain healthy. We have always felt, as our name the CBN Cable Network indicates, that our programming service is designed for cable subscribers and that cable operators are our clients. The cable industry has invested billions of dollars into building delivery systems, and we believe that there is a clear need to protect the integrity of that investment. Quite frankly, I am somwwhat perplexed as to why this letter, which was addressed to a private citizen, was erroneously interpreted and used as evidence in both Senate and House Committee hearings, without any members of those committees or their respective staffs seeking official confirmation from CBN.

The encryption of our signal is the only way to protect both our own rights as producers and the syndication rights of our distributors. Since our business plan calls for the institution of a subscriber fee to cable operators in January, 1987, we also believe that the encryption of our signal is the only way to protect the exclusive nature of our programming.

It seems unfair that home satellite dish owners would receive free what cable subscribers will be paying to receive. Along with other programmers, CBN did respond to the written questionnaire on scrambling. Because that questionnaire gives the very latest information on CBN Cable Network's positions relative to scrambling, let me recommend that your committee refer to it as a statement on our present policy.

I place myself at your disposal for any further comments, should you wish to receive them. We at CBN are ready to answer any questions you may have regarding our position and have always been ready to do so.

I look forward to hearing from you in the future.

Yours sincerely,

TIMOTHY B. ROBERTSON,
Executive Vice President.

Senator GORE. This is a letter from the public liaison coordinator for the Christian Broadcasting Network, totally advertiser-supported:

> One of the major factors in the scrambling decision was the threat from cable operators to refuse to carry the network's programming if the network decides not to scramble. In other words, for many networks unscrambled programming could equal no programming at all.

That is a threat. That is the reason they scrambled. Is that fair?

Mr. MOONEY. Senator, I have heard it said a number of times that that has happened, but nobody has ever said to me exactly who said it to who precisely.

Senator GORE. I just told you. This is from CBN.

Mr. MOONEY. Did CBN say that?

Senator GORE. Yes.

Mr. MOONEY. I think maybe you might want to get CBN at one of these hearings to describe in detail what was the nature of that exchange.

Senator GORE. So you endorse the idea of another hearing?

I am all for that, and I think we ought to get TCI, which has the largest cable operator, which has blatantly threatened advertiser-supported programmers: "If you do not scramble and strangle the supply to our competition, then we are going to drive you into bankruptcy by kicking you off the cable systems." I would like to have testimony from them also.

Do you think that would be a good idea?

Mr. MOONEY. Senator, it would be presumptuous of me to try to dictate the hearing schedule for this committee.

Senator GORE. Thank you.

I will come back to this on a second round, Mr. Chairman.

Senator STEVENS [presiding]. Senator Exon.

Senator EXON. Thank you, Mr. Chairman.

I would like to ask first a question of Mr. Burke. What percentage of the sales of the dishowners that you represent, what percentage of those dish sales are sold in areas not served by cable? Do you understand what I am trying to get at?

Mr. BURKE. Yes; I can answer that. I have never in the history since 1979 ever run an ad in the paper attempting to sell urban people satellite systems. I began to sell them in rural areas and I remain there.

I feel like that percentagewise in the area which I serve, Jacksonville, AR, a suburb of Little Rock, that approximately 90 percent of all the satellite systems that have been sold there in the last 4 years have gone into areas where there is no cable accessibility.

Senator EXON. Can you answer my question, or can you guess an answer to my question about what percentage of the total dish sales are in the areas that—you say are 90 percent in your particular territory. I mean, I had assumed, and maybe I assumed incorrectly, that maybe 80 percent or more of the dishes go into areas that are not presently served by cable.

Mr. BURKE. The best estimates we have, I believe, if you are speaking about overall in the United States, there are estimates that approximately 75 percent are in the rural areas not served. In my particular area of Arkansas, it is much higher.

Senator EXON. Mr. Howard, you evidently have experience with this. Could you help me?

Mr. HOWARD. The industry figure we use is somewhere between 70 and 75 percent are in rural areas. But I point out, the industry survey also looks at the reasons for people buying in those urban areas. And it is not, as Mr. Sikes of the NTIA said, that he thinks that the cable subscriber's motive to buy a dish is to get something free. That comes way at the bottom of the list.

When you get the priorities, their reason for buying is poor service, lack of selection, and high cost. It is not to get something free.

And in your earlier talk, you were discussing perhaps making that dish illegal in urban areas because of that competition. But I would point out that cable was deregulated in view of the fact that here was a technology for the first time that would compete with cable. And so I look at us as the competition to cable and that being a healthy thing, and that eventually what that will do is lower the cost of video to all consumers, anybody looking at a television set, no matter what the delivery mechanism is.

Senator EXON. I do not think I am unique. I live, as you heard earlier, in Montgomery County.

Mr. HOWARD. There is a franchise.

Senator EXON. There is a franchise, but no service.

I also live and have a home in Lincoln, NE, where we have good cable service. And so I am a second-class citizen when I live either in the District of Columbia or the highly prized area of Montgomery County, but I am a first-class citizen when I go home to Lincoln, NE, because I have cable service.

I suspect that if I decided to buy a dish, for example, in my home in Montgomery County, I think maybe I should run the risk of recognizing that somewhere along the line that might not be a very good investment from a monetary standpoint, because I guess I do not quite understand, Mr. Howard, how there could be a great number of people that could afford or would it be a good investment to pay $1,500 to $2,000 for a dish and then $400 or $500 for a descrambler in a certain area.

The point that I am getting at is my main concern or my major concern is for those people who are going to be left out there with no service whatsoever when and if scrambling takes place in the total picture. And so that is the part that I focus on.

Another part of it may be that I can understand the concerns here. And once again, I can emphasize that I do not think people out there in rural America expect to get something for nothing. And if we could develop some kind of a reasonable charge for descramblers, then I think that would work.

My next question was to you, Mr. Howard. You indicated some expertise in the manufacturing field. Can you, without getting into a lot of technical detail, tell us why it is so expensive to descramble a signal? I assume that scramblers in and of themselves are somewhat complicated. Otherwise, somebody could come up with a one-tube minibox that would sell for $5 and therefore would defeat the whole scrambling.

Am I correct in assuming that the scrambling systems are complicated for the reason that it would be expensive and not easy to descramble?

Mr. **Howard**. Well, no. As a matter of fact, M/A-COM has done an excellent job in their descrambler. The parts that actually do the descrambling are very cheap. As a manufacturer, what I need to do the decoding, whether it is the M/A-COM scheme or any other scheme, is a very few chips, which are quite cheap.

The problem is that the scrambling system that we have going now is not an engineered system, it is not a considered system. It is done as a knee-jerk reaction to the cable industry's panic over the competition that we have generated for them.

So what has happened is a major supplier, HBO in this case, and a major manufacturer have gone in a panic mode to put a Band-Aid on a cancer. And what the scrambler does is duplicate an immense amount of stuff. Our receiver, for instance, that we manufacture has everything in it needed to do what that decoder does except for about five chips, which are of course proprietary to M/A-COM because there has been some cost and development in this.

We are perfectly willing to license that to get into that manufacture. Our feeling is that as a manufacturer we can go heads on against any other manufacturer and compete with them, but why have two boxes that contain all the same electronics?

The M/A-COM decoder contains almost everything our receiver has. It is a duplicate of it. So the consumer is really buying about 1.6 or 1.7 satellite receivers to get decoded signals, when all he really needs is 1.0 satellite receivers with the addition of a few chips.

Senator **Exon**. Well, that I can only understand—my time is up, but I can only understand that what we have heard from time to time, that the scrambling systems are so compatible that one descrambler could do the job of descrambling all signals is not accurate.

Mr. **Burke**. That is true.

Senator **Stevens**. Your time is up, Senator. I am sorry.

Senator Ford.

Senator **Ford**. Thank you, Mr. Chairman.

Very quickly, and I will be very brief, and this question goes to Mr. Howard or to Mr. Burke, either one. Are not satellite dishes mainly manufactured in the United States?

Mr. **Burke**. Yes; the majority of them are, yes, sir.

Senator **Ford**. Are there any foreign components in the dish?

Mr. **Burke**. Do you mean in the system?

Senator **Ford**. Yes.

Mr. **Burke**. Yes, sir, there are.

Senator **Ford**. What percentage of foreign equipment or foreign components are in the construction of a dish?

Mr. **Howard**. Well, in the satellite systems at one time it was all American, there were no foreign components. We saw the low noise amplifier business invaded by the Japanese about 2 years ago, and they probably have achieved, oh, 75-percent market share now. They achieved 50 percent very rapidly.

The antennas, we see very few of them coming from overseas, although there are a few coming from Taiwan now. It is amazing to me that they can fabricate a large aluminum assembly in Taiwan and ship it over here in components and still make out on it, but they are doing that. It is not a large part of the market yet.

In receivers, it is a mix. I cannot quite tell what it is, but it is probably 50 percent of the receivers are coming from offshore right now.

Senator **Ford**. At the high point, how many Americans were employed in the manufacturing of satellite dishes, at the high point?

Mr. **Burke**. In Arkansas, I can answer for that one State, which is quite a majority of manufacturers of dishes there. There was approximately 3,000 employees in just the manufacturing of the dish itself, the parabolic reflector. Most of the electronics have been manufactured in other areas, out in the Silicon Valley and California. Of course, a lot of that has shifted now to overseas, Japan and Korea.

Senator **Ford**. How many are employed now in Arkansas, Mr. Burke?

Mr. **Burke**. Approximately 450.

Senator **Ford**. Mr. Howard, do you have any kind of national figures?

Mr. **Howard**. I cannot give you a national figure. I know that the experience in California—and I am in the Silicon Valley area—is quite similar, in that some companies have totally disappeared, some like ours have shrunk back. I do not know of anybody that has grown through this period, I would put it that way.

Senator **Ford**. Thank you, Mr. Chairman.

Senator **Stevens**. Thank you.

Senator **Rockefeller**. Nothing for the moment, Mr. Chairman.

Senator **Stevens**. Mr. Mooney, do you consider the satellite operators as competitors?

Mr. **Mooney**. I consider the backyard dish to be a competitive technology, yes, as a distribution technology, certainly.

Senator **Stevens**. And have you explored the question of what could be done to encourage HBO and Showtime to be more willing to deal with these people who are not cable franchises?

Mr. **Mooney**. Well, HBO—and I have had long experience with both HBO and Showtime, and my experience with both has been that they tend to have their own minds. They pretty much tend to do what they think is in their business interest.

Senator **Stevens**. Well, you all did a very good job in connection with the must-carry rule. I think you are right in what you said about your association. But have you tried to perform a similar function to try to smooth out this situation.

Mr. MOONEY. Yes, of course I have, and I do not think there has been any resistance of the part of HBO or Showtime on the question of whether the programming should be sold to dishowners or whether it should be sold to dishowners at a reasonable price, because, you know, HBO and Showtime are out to maximize revenues and they do not care where the dollars come from.

In this business, as in any other business involving this kind of product, efficiency is maximized where the volume of sales comes together with the price of each sale to yield up the maximum amount of revenues. And so they want to sell it, they want transactions.

The uncertainty, however, has been—and this, some people might not like me saying this—really whether HBO and Showtime decide it is in their own business interest themselves to be the point-of-sale retailer to the dish owner or whether they want to go through some third party, like the NRECA.

And that is essentially a business judgment, about which they do not look to me for advice.

Senator STEVENS. I find I have a yellow light and I have only asked one question here.

Senator FORD. They stay on a long time. Just remember, you are the big gorilla.

Senator STEVENS. I am just a substitute gorilla. I have got the suit on, but underneath it is a different person.

Mr. Burke, you say that you have formed the National Satellite Alliance?

Mr. BURKE. Yes, sir.

Senator STEVENS. That is really an alliance of people who sell dishes?

Mr. BURKE. It is an alliance of satellite dealers and dish owners.

Senator STEVENS. What are you talking about, satellite dealers? Help me.

Mr. BURKE. Retail dealers, sir, like myself.

Senator STEVENS. You do not sell the birds up in the air?

Mr. BURKE. No—sell and install Earth stations, the backyard dishes.

Senator STEVENS. Senator Gore.

Senator GORE. Thank you, Mr. Chairman.

I was pursuing a line of questions with you earlier, Mr. Mooney, about coercion by the cable industry against programmers. I would like to quote to you a statement from the director of programming for Cox Cable, Terry Friedman, in connection with the CBN decision. He says:

"It is their obligation to participate in scrambling. Everybody is going to sacrifice something when it happens."

Mr. John Sie, from TCI says: "The programmer who does not want to scramble we would not want to continue supporting in our systems."

Mr. MOONEY. I believe, Senator, that these statements are premised on the perception that it is tough to be in the pay television business if you are effectively spilling the product all over the landscape for free.

Senator GORE. It would be nice to be able to have total control over the supply of the raw material and be able to deny it to any new competitor. I understand the impulse.

The question of fairness and legality is something else.

Mr. MOONEY. Sir, in fairness, I am not sure that the desire of the cable industry to protect the economic integrity of the product as pay television through scrambling is synonymous with the desire to deny the product to competitive distribution technologies.

Senator GORE. Why did the industry then coerce CBN to scramble?

Mr. MOONEY. CBN has not scrambled. There are only three programming services that have in fact scrambled.

Senator GORE. CBN is imminently going to scramble.

Mr. MOONEY. That is news to me.

Senator GORE. Well, it has been widely reported in all of the trade press, Mr. Mooney. I do not want to cross swords with you on a quibble. I mean, they said they are going to scramble.

Mr. MOONEY. I am just observing that the actual scrambling that is going on seems to me from my perspective to be going a whole lot slower than anybody thought it was going to, from what people were saying at the beginning of the hearing. Only three services have scrambled, in fact.

Senator GORE. They have said they are going to scramble and they have said the reason is coercion by the cable industry, and the reason for that coercion is obvious. They have said as much. They want to choke off the supply to this competition.

Now, here is a statement from a Newhouse executive, the Nation's ninth largest programmer. He says: "I think the critical thing is what the price and package is," speaking of the price to dish owners. "It has got to be a price that is above what we charge for our services."

Mr. MOONEY. Sir, are you reading from something in the trade press?

Senator GORE. This is in the trade press, and I would ask—it is from the First Communications Group, and I would be glad to put it in the record.

Mr. MOONEY. I do not believe Bob Miron ever—Bob Miron is the head of the relevant division of Newhouse—I do not believe Bob Miron ever made such a statement.

Senator GORE. Well, to add some credibility to it, let me say that he goes on to say: "I am not sure it will clear muster with the Justice Department, but we have got to know where we stand." And so I think he recognizes it is a problem.

But of course, nothing has happened.

Do you think that the decision on pricing to home dish owners is an arm's-length decision that has no connection whatever to the price they charge to cable systems?

Mr. MOONEY. Yes, I do. I notice that HBO originally stated one price and then Showtime came in and undercut that price, and then HBO jumped over Showtime and undercut that price. So you already have price competition going on between these two services, which historically have perceived themselves to be very much in competition.

Senator GORE. Both prices are still significantly above the price that they charge to cable customers.

Mr. MOONEY. I do not think that is correct, Senator. There are cable customers in the United States who pay more.

Senator GORE. There may be some, but the average price for cable customers in the United States for HBO and Showtime is still significantly below the price that they are charging for these.

But let me come back to this line of questioning that I am pursuing here. How can their decision on pricing have no relationship to the price to cable operators when they are cable operators? Do you understand my point? I mean, they wear two hats. They are programmers and they are cable operators, among the largest in the industry.

Can you say with a straight face that they completely—that they develop amnesia about their business interest in the cable industry when they establish their pricing structure for dish owners?

Mr. MOONEY. No; I think there is some relationship between the two prices, and I will tell you what it is. As I described a few minutes ago, with this type of product, the perfect price is that which will yield up the optimum number of sales at the optimum price to yield the greatest amount of revenue.

The only experience they have in terms of what the market tolerance is for price is through cable systems, and so I suppose that gives them some rough idea of what people are willing to pay. But I think that is the only relationship.

Senator GORE. Well, of course I have another mechanism in mind. I think that they obviously are concerned about the technological competition to their main source of revenue, which is the cable industry.

Now, do you support the——

Senator STEVENS. I am sorry, Senator. Your time is up.

Senator Ford, do you have any questions?

Senator FORD. Mr. Mooney, it looks like you're getting picked on here.

Mr. MOONEY. I get paid for it. That is all right. That is part of the territory.

Senator FORD. I remember when you were 6 foot 4, too.

Mr. MOONEY. I do, too.

Senator FORD. Will you continue to be my straight man? We will do all right.

Mr. MOONEY. Senator, I have had an opportunity to play this role in both the House and Senate committees, and I am getting quite accomplished at it.

Senator FORD. Good. We might put on our own HBO.

In the past, you all have been able to work out things within the industry. Have you sat down with the satellite manufacturers and I guess the group of dish owners and tried to arrive at an amenable situation?

Mr. MOONEY. That is a good question. We, my industry and my trade association in particular, are notorious compromisers around this town. We are always trying to put out these controversies, and we compromised with the cities, we compromised with the broadcasters, occasionally with the phone companies, and so forth.

The trouble with this issue is that it really does not yield to trade association compromises as a solution, because the solution you are looking for involves pricing and packaging and the antitrust laws will not let the trade associations go near that.

Senator **Ford**. I thought maybe, you got into must-carry and some of these other things, and I am not a lawyer.

Mr. **Mooney**. It is the pricing and packaging part of it and the antitrust laws that keep us from trying to solve this.

Senator **Ford**. I look at the five of you at the table there and I believe you all could sit down and work out most anything.

Mr. **Mooney**. If you suspend the antitrust laws, we will have this worked out in a half hour.

Senator **Ford**. I so move, Mr. Chairman.

But it seems to me—and I understand that, and you gave me a good answer, and I am sorry that you cannot do it because, as you say, you probably are a descendant of Henry Clay, a great compromiser who happened to be from Kentucky, Mr. Chairman.

And I thank you—and my green light is still on.

Senator **Stevens**. So you gave some time back.

Senator **Ford**. Would you like to have it?

Senator **Gore**. I would.

Senator **Stevens**. I think we will move on. I just have two questions, really.

Mr. Bunker, how many consumer descramblers have been sold and how many consumers have become subscribers now to scrambled programming?

Mr. **Bunker**. As I stated earlier, Senator, we have manufactured over 90,000 units, shipped or sold over 80,000 units, and we have records that over 25,000 American consumers have purchased descramblers from home TVRO dealers, cable operators, or other distributors.

Senator **Stevens**. You make the point, though, that in some instances, some dish owners are going to have to have more than one descrambler?

Mr. **Bunker**. If a dish owner has purchased multiple receivers to be able to watch several channels simultaneously, then he needs a descrambler for each receiver, not for each TV set. It is a function of how many satellite receivers, how many simultaneous channels he wishes to watch.

Senator **Stevens**. How much does that dish cost, Mr. Burke?

Mr. **Burke**. $1,700 to $2,500.

Senator **Stevens**. And how much does the decoder cost?

Mr. **Burke**. $395.

Mr. **Bunker**. If the man has purchased three or four satellite receivers with the TVRO satellite dish, as it is called, he has spent more money for the individual receivers as he split the signal into several channels.

Senator **Stevens**. But he will end up not paying anything to the people who originated the programming, is that right? He will not pay anything to anyone who put the thing up on the satellite?

Mr. **Bunker**. There is a small percentage of Americans today who have several satellite receivers in their home, bedrooms, family rooms, living rooms, and if the signal is unscrambled, they can get it in several rooms simultaneously without paying for it, of course.

Senator **Stevens**. The people who buy your dishes and buy your decoders are not going to pay anything to the people who put the programming together and put it on the satellite, are they?

Mr. **Mooney**. Yes, sir; that is the function of the scrambler.

Mr. **Burke**. That is the reason for the scrambling at the present time. The so-called premium channels, HBO and those, there is a marketplace there that they are offering through these $395 decoders. You can purchase that at an exorbitant price. It is available now.

But only two of the so-called basic programmers have scramblers at this point, WOR and CNN News.

Senator **Stevens**. All right. Well, contrary to the others, I live in the Maryland suburbs here, and I do not have cable in Alaska or here. I am still an over-the-air junkie, you know. I just do not understand some of your complexities. I will have to study it a little bit further.

Jack, that reminds me, though. I do have a videocassette. I tape your movies off the air, and look at them again from time to time, and I also buy tapes.

Now, is there not a leveling point here, where people who really want to watch the movies are going to buy tapes rather than buy all of these dishes and two or three decoders? Is this not going to raise the videotape industry to a higher point?

Mr. **Valenti**. Yes, sir; I do not think there is any question about it. In time it is going to affect moviegoing and lessen revenue to us, because movie producers and distributors do not receive any revenues from the rental of prerecorded videocassettes.

Senator **Stevens**. So it is not just a simple problem here of dishes and decoders. This is a very complex picture involving the whole industry.

Mr. **Valenti**. It is a very complex picture, Senator. At issue is the protection of intellectual property, something you put out for sale, and that is laudable. And I do not think that any dish owner in America is complaining about the fact that he ought to pay for something that people own, any more than Mr. Howard or anybody sells a dish free. They pay for those dishes; they pay a lot.

And sometimes it is frustrating to find that the only people who seem to have their products taken away free of charge are the people who make movies and entertainment.

But that protection is colliding with, as I have said before, with the geographic monopoly in the cable industry. And I think that is where the problem lies.

Senator **Stevens**. Well, thank you all very much.

Senator **Gore**. Mr. Chairman, I would like to ask unanimous consent to put in the record statements I referred to earlier about coercion.

Second, I would like to include in that request that we put in the record a news release from the National Cable Television Association that came out recently. Mr. Mooney said it was news to him that CBN was going to scramble. This is news from him that CBN is going to scramble fourth quarter, 1986.

I would also like the record to reflect statements from the cable industry before the House Commerce Committee in 1982[1] in support of Federal legislation to require compulsory copyright to allow them access to broadcaster signals as "the only vehicle available to stop consumers from turning on their sets to find that the channels for which they are looking are gone."

I am frustrated that I can ask no more questions, but I fully understand the committee's time crunch. Is that unanimous consent request granted?

Senator **Stevens**. There is no objection to your request, and it will be printed in the record.

Senator **Gore**. Thank you.

[The following information was subsequently received for the record:]

FACTSHEET ON SCRAMBLING CABLE TELEVISION SIGNALS

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The anticipated schedule for scrambling of those planning to scramble follows: BET (Black Entertainment Television)—1987. Bravo—No firm date. CBN Cable Network—4th Quarter, 1986. CNN—July 1986. Cinemax—January, 1986. Disney Channel—mid-year 1986. ESPN--late 1986. Financial News Network—no firm date. Headline News—July 1986. Home Box Office—January 1986. Home Theater Network—no firm date. Lifetime—1987. MTV: Music Television—July 1986. The Movie Channel—May 1986. The Nashville Network—No firm date. Nickelodeon—July 1986. Playboy Channel—1987. Showtime—May 1986. TEMPO—September 1986. USA Cable Network—fourth quarter, 1986. VH-1: Video Hits-One—July 1986. WOR—March 1986. WTBS—September 1986.

Senator **Stevens**. Thank you, gentlemen. We appreciate your patience, and we will go to the next panel, if we may.

The next panel is Mr. Bob Bergland, executive vice president of the National Rural Electric Cooperative Association; Mr. Michael J. Fuchs, chairman and chief executive officer, Home Box Office, Inc.; Neil Austrian, president, Showtime/the Movie Channel, Viacom International; Phil Jones, CBS Television Network Affiliates Advisory Board; Harold Crump, chairman of the NBC Affiliates Legislative Committee; and Keith Lamonica, FM America.

Let me state that your statements will be placed in the record in full as though read, and we would appreciate it if you could stay within our time limits so that we can complete the record.

Mr. Bergland, you are first.

STATEMENTS OF BOB BERGLAND, EXECUTIVE VICE PRESIDENT, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION; MICHAEL J. FUCHS, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, HOME BOX OFFICE, INC.; NEIL AUSTRIAN, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, SHOWTIME/THE MOVIE CHANNEL; PHILLIP A. JONES, PRESIDENT AND GENERAL MANAGER, KCTV; HAROLD C. CRUMP, ON BEHALF OF THE NBC TELEVISION AFFILIATES ASSOCIATION, INC.; AND KEITH LAMONICA, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FM AMERICA

Mr. **Bergland**. Thank you very much, Mr. Chairman and members of the committee. The National Rural Electric Cooperative Association, of which I am general manager, consists of 1,000 rural consumer-owned electric cooperative associations serving about 10 million families in 46 States.

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[1] See serial No. 97-140, Senate Commerce Committee, p. 66.

Thirty million Americans live beyond the reach of cable television, and studies have shown that in the rural electric service territories three quarters of our members do not now have cable and probably never will have cable. It is for these consumers, who do not have access to cable, that the rural cooperatives have begun work to insure the availability of reasonably priced scrambled broadcast signals.

We serve in locations that are simply too sparsely populated to support cable service. It is for this reason that the advent of the backyard earth station has such tremendous importance in rural America.

Rural electric system's future is tied to the economic development——

Senator **Stevens**. Mr. Bergland, let me interrupt you just a moment. We are playing musical chairs here. Senator Pressler will chair the hearing from here on. Thank you.

Senator **Pressler** [presiding]. Please continue.

Mr. **Bergland**. The logic of this argument is no less compelling now than it was in the 1930's when used in support of the rural electrification movement.

Our organization, along with other related rural cooperative organizations, has just recently formed the National Rural Telecommunications Cooperative, NRTC, which will delve into the telecommunications needs in our rural service territories as well as determine the role that rural cooperatives can play to service these requirements.

This enterprise is strictly a private sector initiative. No government support or revenue is being used in support of this effort. I have outlined this in more detail in my full statement, but I wanted to dispell any confusion about the Federal agency, the REA. We are a totally private enterprise, not in any way connected with the U.S. Government. The "REA" is a common term used to describe rural electric associations and is sometimes confused with the Federal agency providing assistance to the electric component of this great organization.

These local telecommunications cooperatives, the national cooperative, and their funding will be totally dependent on the private sector. Through the NRTC, we hope to be able to provide agreements with the various program providers, again marketing a plan by which our consumers can receive a basic package of currently scrambled signals in early 1987.

We believe it is vital that these services be made available to rural people at a price which the average family can afford to pay. Given that they are already required to finance their own receiving and decoding equipment, and in view of the economic conditions which prevail in rural America, we feel the most these consumers can afford for a basic programming package is an additional $10 per month.

We think this can be done by capitalizing on the unique strengths and the capabilities of the rural electric systems as well-established businesses, recognized in their communities as vital, reliable institutions.

Some broadcast executives have stated that a major impediment to descrambled service is that no infrastructure exists to reach these rural consumers. Rural electric cooperatives are that infrastructure. We not only can bring the consumer to the programmer, but we can bring the programmer to the consumer. We are the bridge to close the chasm that exists today.

This is the basic outline of what we hope to accomplish, Mr. Chairman. We have a long way to go. This is a thoughtful and a difficult process. We want to deliver quality programming to our rural constituency, those who reside in rural America and who do not have access to cable television.

We understand quite clearly that Congress is looking to us as one possible solution to the scrambling issue. Our focus, like yours, is to provide viewing at affordable prices. We know that something tangible must be done by early September, or it is likely that Congress will be moved to act upon this issue. Your concern, like ours, is to insure the availability of signals in sparsely settled areas of rural America.

Mr. Chairman, thank you very much.

[The statement follows:]

STATEMENT OF BOB BERGLAND, EXECUTIVE VICE PRESIDENT OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Chairman and Members of the Committee, my name is Bob Bergland, I am the Executive Vice President of the National Rural Electric Cooperative Association (NRECA). I am accompanied by Mr. Jack Wood, Telecommunications Project Manager of NRECA and Mr. Gary Gordy, Planning and Member Relations Officer of the National Rural Utilities Cooperative Finance Corporation (CFC).

I am pleased to appear before you today to discuss with you the exciting activities that rural electric cooperative systems across America have been pursuing in an effort to bring quality and affordable telecommunications technology to rural Americans. I appear before you today on behalf of NRECA, CFC, the National Rural Telecommunications Council (Council) and the National Rural Telecommunications Cooperative (NRTC). The National Telephone Cooperative Association (NTCA), a member of the Council, would like to associate with these remarks as well.

INTRODUCTION

By way of brief background, NRECA is the national service organization for the 1,000 not-for-profit electric systems providing central station power to 25 million Americans. We serve in 46 states and in 2,600 of the 3,141 counties and county-type areas of the United States. Our consumer density is the lowest of any of the electric utility systems, just five consumers per mile of line. By way of comparison, investor-owned utility systems serve more than 30 consumers per mile and municipally-owned systems serve more than 65 consumers per mile. Rural electric systems serve more than 75 percent of the nation's land mass but only 11 percent of the population.

The National Rural Utilities Cooperative Finance Corporation (CFC) has a membership virtually identical to NRECA's. CFC is the financial cooperative which provides the rural electric systems with the private capital portion of their financial needs. Under the lending arrangements with the Rural Electrification Administration (REA) at the U.S. Department of Agriculture, most of the 930 rural electric distribution systems borrow 70% of their capital requirements from the REA Revolving Fund, and the remaining 30% from private sources. CFC is the predominant private lender to these systems, and also provides financial services for the 63 generation and transmission (G&T) cooperatives which supply almost 50% of the wholesale power needs of the rural electric systems.

RURAL ELECTRICS' ROLE IN TELECOMMUNICATIONS

Throughout their more than 50 year history, rural electric systems have played a role in their communities that goes far beyond the delivery of electric energy. As locally controlled, service oriented organizations, rural electrics have become involved in a wide variety of projects, programs and services designed to help improve the overall quality of life of the people they serve.

We strongly believe that adequate telecommunications services are an important component of the quality of life in today's world. Statistics that we have seen, however, project that 30 million Americans will never be within a cable-wired area. Studies also have noted that in rural electric service territories, 75% of our consumers do not *now* have cable and probably will never have cable. We serve in locations that are simply too sparsely populated to support cable service. It is for this reason that the advent of the backyard earth station has such tremendous importance in rural America—our service areas.

Because rural electric systems are locally based service organizations, our own future is tied to the economic development of rural America. It is therefore incumbent upon us to insure that our service territories are able to compete for and support industrial development. To be competitive, these areas must have access to similar services—like telecommunications—as are available in more densely-settled areas. The logic of this argument is no less compelling than it was in the 1930's when used in support of the rural electrification movement, at a time when less than 10% of the nation's farms were wired for electricity.

Today our membership has changed. While we still serve a large number of full-time farmers and ranchers, today's rural electric consumer is just as likely to be a blue-collar worker who depends on a job in a nearby small town in order to support some part time farm activity. These people have chosen to live in rural America because it offers them a quality of life they can't find in the more densely populated areas. This does not mean, however, that they do not want and need the modern features of daily life like television which most urban and suburban people take for granted.

You have seen the statistics on the availability of channel diversity in rural America. TV signals are distant and unreliable. Movie theaters are, like the population, sparely located and few in number. Backyard earth stations have been the vehicle to provide diversity and quality to the enjoyment of rural living. The ability to receive news broadcasts, financial and commodity reports, educational programming, weather reports, as well as entertainment are an asset to modern rural living. The signal scrambling that has begun among the premium programmers has put a halt to the sale of TVROs. There is a great concern in America's rural areas that scrambling may "darken the skies."

CHALLENGES AND OPPORTUNITIES FOR SERVICE

We believe that positive action is required to ensure that the needs of rural America are not overlooked as the importance of satellite communications technology continues to grow. To this end, NRECA and CFC joined together to explore the application of satellite telecommunications technologies to the information and communication needs of our membership. Pursued largely in the interest of rural development, we commissioned a study by the Southern Engineering Company of Atlanta, Georgia. This was an exhaustive review of all aspects of communications used by rural electric systems. Three major recommendations were developed:

1. Rural electrics should develop a two-way (bi-directional) satellite system to enhance their internal business communication systems, first in the data transfer area, next in the voice area, and finally in the video area for video-conferencing. These would include automated substation monitoring, energy management systems, load management systems, electronic mail, funds transfer, and electronic bulletion boards;
2. Rural electric systems should consider becoming involved in a consumer level satellite dish program in their service areas; and
3. Rural electrics should develop a national rural electric channel with programming devoted to rural electric technical efforts and designed specifically as a service to rural America and rural development.

In September of 1985, NRECA and CFC formed the National Rural Telecommunications Council (Council), a steering committee drawn from rural electric distribution and power supply systems, statewide and service organizations as well as REA and NTCA. This Council has met monthly, outlining the interests of rural electric systems in the following areas: technical standards for new equipment, leasing and/or purchase of telecommunications equipment as well as necessary satellite space, personnel training, systems development and application, legislative and industry representation, programming involvement, financing of TVRO and bi-directional systems, volume purchasing agreements through a rural electric supply organization, and rural electric programming.

During the past nine months, the Council has developed a comprehensive manual to assist members interested in marketing TVRO systems, specifications and standards for TVRO systems and a TVRO installer's manual. It has implemented a pilot TVRO marketing program and a study of potential bi-directional pilot projects. Also, it has assisted in the establishment of Rural American Communications Inc. to provide bi-directional data services to the rural electric program.

OUR COMMITMENT TO ON-GOING INVOLVEMENT

At its meeting in May 1986, the Council approved Articles and Bylaws for a national telecommunications cooperative and a plan of organization. A three-year operating plan for this new cooperative venture has recently been approved by both the NRECA and the CFC Boards of Directors.

As we envision it, the National Rural Telecommunications Cooperative (NRIC) will provide a variety of programs and services that will help crystalize and facilitate rural electric involvement in TVRO and related telecommunications services. These may include:

1. Assisting in the organization and operation of rural electric affiliated entites created to provide TVRO systems and related telecommunications services within their recognized service territories.
2. Developing and implementing bi-directional satellite systems for system operations and national program applications.
3. Coordinating a national plan for the purchase and distribution of telecommunication systems and equipment.
4. Formulating a strategic plan for meeting short- and long-range programming needs of rural areas, including the marketing and administration of satellite programming and the development of a prototype national rural electric satellite network.
5. Continuous monitoring of emerging telecommunications technologies with potential for rural electric applications.
6. Providing technical, engineering, legal, legislative, and administrative expertise through appropriate staffing and contractual agreements with CFC, NRECA, and specialized consultants to implement the functions outlined above.

Providing satellite entertainment and information for the millions of rural Americans who will never have access to cable services is a compelling objective for the nation's rural utility cooperatives. Satellite communications technology also offers an exciting opportunity for rural electrics to communicate better with their member owners, to educate the elected directors and staff members through teleconferencing and to operate our rural utility systems more efficiently.

A member of our group will soon provide data processing services to 170 rural electric cooperatives by means of a 2-way satellite data transmission network. Costs will be sharply reduced and efficiency and reliability of the system improved. From this data transmission network, other rural electrics intend to utilize electronic bulletin boards, facsimile transmission, funds transfers, and other management and operating applications.

The rural electric program intends to use satellite technology for the ultimate benefit of its 10 million member owners. We see this technology as important to rural America in the 1980s and '90s as electricity was in the '30s and '40s.

The NRTC will be organized as a private enterprise cooperative, owned and controlled by its membership. It will be operated on a cooperative not-for-profit basis for the mutual benefits of its patrons.

One of NRTC's first efforts will focus on the issue of scrambling. The NRTC (and its predecessor Council) have taken a detailed look at what can be done through this national cooperative, and will begin the process of putting together a package of currently scrambled broadcast signals which we will make available to rural home satellite dish owners at an affordable monthly cost.

The NRTC has begun the process. An executive of NRTC has already contacted a number of the scrambled programmers. By the time of this hearing, initial conversations have been held with both Home Box Office (HBO) and Showtime/The Movie Channel. Additionally, the NRTC interim Board will be meeting in Washington, D.C. on August 6-7.

We hope to be able to negotiate acceptable terms with the various program providers and begin marketing this package to our consumers in early 1987. We envision putting together a basic package of scrambled signals. This basic package may include several "superstations," a sports channel, a news channel, plus one family-oriented movie channel. We would also offer, on an add-on basis, other cable-type program servics including movie channels.

BRINGING PROGRAMMING TO RURAL AMERICA

As mentioned above, Mr. Chairman, we believe it is vital that these services be made available to rural people at a price which the average family can afford to pay. For this reason, we feel we must be able to market this basic package for under $10/month.

Under our economic assumptions, a TVRO owner has financed a TVRO system plus a decoder. Assuming a low $2,000 price tag for the dish and $410 for the installed decoder (financed for 60 months at a 10% interest rate), the monthly cost for hardware will be more than $50/month. If an individual viewer were to subscribe to four individual scrambled signals at an estimated cost of $10/month for each premium channel, this would add another $40/month on top of the $50 for hardware.

We feel strongly that rural consumers should not be expected to bear a $90/month expense when similar services are offered to cable subscribers in urban and suburban areas for approximately one-half this amount.

Given that they are already required to finance their own receiving and decoding equipment, and in view of the economic conditions which prevail in rural America, we feel the most these consumers can afford for programming is an additional $10/month.

This, of course, gives rise to the question of how we—or anyone else, for that matter—could hope to deliver the kind of basic viewing package I described earlier to rural consumers a price of $10/month? We think it can be done, by capitalizing on the unique strengths and capabilities of the rural electric systems:

Volume.—Our survey results reveal a potential market of 1.2 million Americans.

Infrastructure.—Rural electric systems have been in the business of providing reliable electric service in rural America for more than 50 years. They are well established, and recognized in their communities as vital, reliable institutions. It will be possible for them to set up separate subsidiary rural telecommunications cooperatives. These two systems can share billing, service, and other administrative functions, while accounting for them separately so that each carries its full share of the cost of operation.

We are aware that some have voiced concern that the Federal government, through the loans provided rural electric systems from REA, would be subsidizing these telecommunications activities. In this regard, I would call to your attention a letter signed by former USDA Under Secretary Frank Naylor stating that "*REA requires* that there be *no cross-subsidization* of the satellite business by the electric cooperative."(*Italic added.*)

Mr. Chairman, I would like to take a moment to clarify an issue of discussion regarding this point. This rural telecommunications cooperative venture would be a totally private sector initiative. CFC, the predominant private capital source for the rural electric systems would be the lender to these telecommunications enterprises.

The government would not be involved. We have heard that some competitors in this field fear what they mistakenly perceive as government support. I grant you that some confuse NRECA and our cooperative members with the REA. Some call our rural electric cooperative systems "REAs." Some confuse NRECA, the private trade association, with the U.S. Department of Agriculture's REA. I would like to take this opportunity to state that these rural telecommunications cooperatives and the joint NRECA-CFC effort *receive no government support.*

Also, some broadcast executives have stated that a major impediment to descrambled service is that no infrastructure exists to reach rural consumers. Rural electric cooperatives *are* that infrastructure. We not only can bring the consumer to the programmer, but we can bring the programmer to the consumer. We are the bridge to close the chasm that today exists.

Not-for-profit, consumer-ownership.—It has often been stated that the cooperative form of enterprise is the "yardstick by which to measure the true cost of providing service." Cooperatives are "service maximizers" not "profit maximizers". We're not there for the return on the investment. What we are attempting to do is risky, indeed, but we have no investors to reward for venturing this capital. We risk our own money to serve ourselves.

CONCLUSION

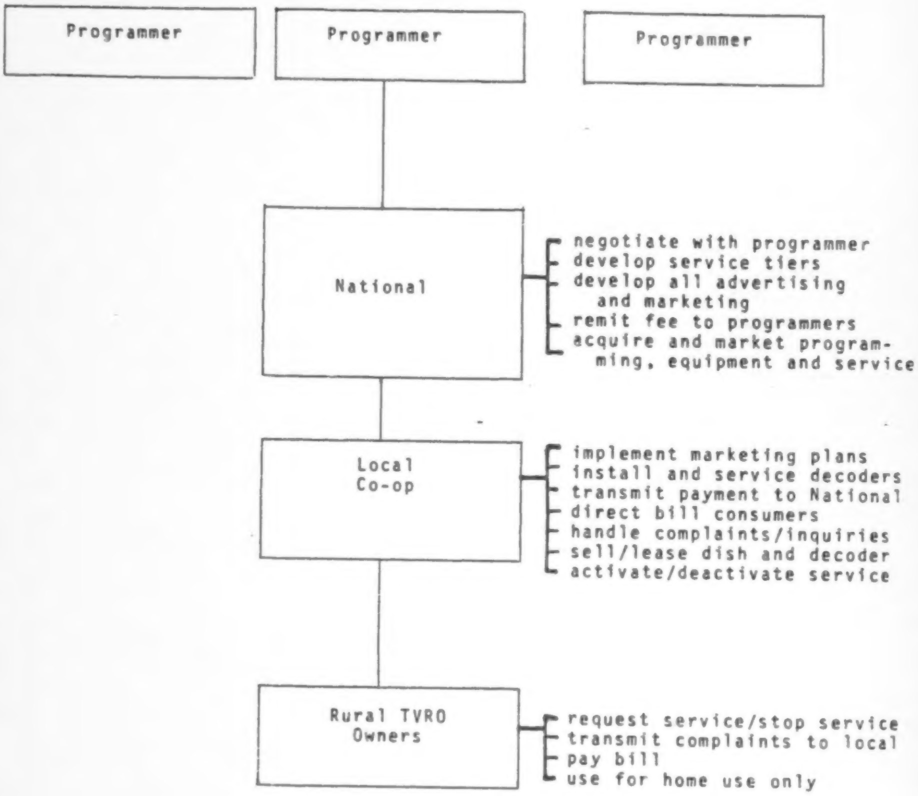
This is the basic outline of what we hope we can accomplish. (A schematic attached to this statement outlines the differing levels of cooperative activities.) There's a long way to go, but I hope that in a few months time I will be able to report back to you and your colleagues, Mr. Chairman, that we have been successful in putting together a basic programming package with premium options that will serve rural America with fair, reasonable and equitably priced satellite programming.

Mr. Chairman, as you know, this is a thoughtful and difficult process. We want to deliver quality programming to our rural constituency—those who reside in rural America and who do not have access to cable television. We understand quite clearly that Congress is looking to us as one possible solution to the scrambling issue. Our focus, like yours, is to provide viewing at affordable prices. We know that we must have something tangible by early September or it is likely that Congress will be moved to act upon this issue. Your concern, like ours, is to ensure the availability of signal in the sparsely-settled areas of America.

We deeply appreciate the Congressional goodwill that the rural cooperatives have received. We are working on this matter in earnest and keenly understand the Congressional timetable for action.

NRECA and the Council are supportive of the legislative efforts that have been a part of these hearings. We applaud the efforts of Senators Ford, Gore, and Bumpers who have introduced legislation which would provide a framework to ensure that rural residents who do not have access to cable will have reasonable and affordable access to scrambled programming. NRECA, CFC, the Council and the NRTC are attempting to accomplish the same goals. We want our member-consumers and other Americans to have access to reasonably priced, quality programming. I commend you and the Committee for holding these hearings and I appreciate the opportunity to present this statement.

BUSINESS ARRANGEMENT


Programmer
Programmer
Programmer
National
negotiate with programmer
develop service tiers
develop all advertising and marketing
remit fee to programmers
acquire and market programming, equipment and service
Local Co-op
implement marketing plans
install and service decoders
transmit payment to National
direct bill consumers
handle complaints/inquiries
sell/lease dish and decoder
activate/deactivate service
Rural TVRO Owners
request service/stop service
transmit complaints to local
pay bill
use for home use only

Senator PRESSLER. Thank you very much.

Let me next call on Mr. Michael J. Fuchs, chairman and chief executive officer, Home Box Office.

Mr. FUCHS. Good morning, Mr. Chairman. HBO and Cinemax have now been scrambled for approximately 6 months, and I believe the public policy debate has evolved into one central issue. Has the marketplace started to work? The answer to that question is yes.

Let's look at the marketplace numbers. In the 6 months since HBO began scrambling, we have signed up over 32,000 subscriptions. All of these subscriptions came to us with dishowners still having the option of receiving other premium services without cost. That question was raised earlier. There are other premium movie services out there that are not yet scrambled. I also maintain we would have sold significantly more subscriptions if the dishowner had not been getting such confusing information about scrambling.

It appears that the TVRO demand for pay TV is steadily rising. Last week, for the first time we sold over 2,000 HBO and Cinemax subscriptions. In light of the dozens of unscrambled channels still available, we are quite encouraged by our subscription numbers. As confusion over scrambling recedes, we are confident that dish sales and subscriptions will steadily rise.

The marketplace mechanics on price are also quite illustrative. On January 15, HBO began selling HBO or Cinemax for $12.95 per month or both for $19.95. On June 11 we announced a discount for yearly subscriptions which brought the effective monthly rate for HBO or Cinemax down to $10.79 and a monthly combination price to $16.63. The marketplace, as it always does, has made its demands, and HBO is responding.

Scrambling opponents now contend that the marketplace has failed to develop a mechanism for packaging scrambled satellite services. This concern is misplaced. Dishowners can self-package services at a rate that is often less expensive than a cable subscriber pays.

For example, with a yearly subscription a dishowner can get HBO and Cinemax for $16.63 per month. The scrambled basic services can currently be purchased for about $2 per service per month. Thus, if the dishowner were to choose eight basic services, he would pay about $16 per month. With HBO and Cinemax he would pay $32.63 for two pay services and eight basic services. Senator Bumpers 'comment about $100 for a TVRO subscriber quite honestly is clearly unfounded.

By comparison, the cable subscribers in the Washington area pay $36.20 for two pay services and eight satellite basic cable services. A dishowner has much greater flexibility. He gets to pick the specific basic services he wants, and he has the ability to modify his rates as he desires. Some might consider that these options put the dish owner in a substantially better position than the cable subscriber.

In addition, HBO and other program suppliers will have the capability and the right to sell packages of pay TV and basic cable services as these basic cable services are scrambled, with the consumer placing one simple phone call.

Positive marketplace signs are also surfacing for dish dealers. Dish sales have begun to pick up since January 1986. In fact, the total dish sales for the month of April doubled January sales. One recent survey estimated that such sales trends will strongly continue. Scrambling can be a very positive development for dish retailers.

We clearly had the consumer in mind when we decided not to authorize any entity, including the cable operator, to offer our service to dishowners on an exclusive basis. Inside cable franchise areas, HBO offers an alternative: subscriptions directly through our 800 number. In addition, we will consider other distribution methods if they make business sense.

In short, the marketplace is clearly starting to work even in its infancy. The evidence is tangible. Price competition, packaging developments, and renewed vigor in TVRO sales.

Our goal is to be available everywhere. We want HBO in every home in America. Pay cable subscriptions have slowed down, making TVRO's an increasingly critical new business opportunity for HBO. We have joined SPACE to help us sell to those customers. We have instituted a program for TVRO dealers to help them sell equipment and sell HBO. We are clearly incented to make every effort to get as many TVRO customers as possible.

Accusations have been made today of kickbacks, stonewalling, monopoly programmers, and vastly overcharged dishowners. Five minutes is an inadequate time to deal with these provocative and inflammatory statements, statements which I take very seriously. I presume we will get the opportunity to respond to each one of these statements following these brief opening comments.

Thank you.

[The statement follows:]

STATEMENT OF MICHAEL FUCHS, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, HOME BOX OFFICE, INC.

Good morning Mr. Chairman and members of the Committee. My name is Michael Fuchs. I am Chairman and Chief Executive Officer of Home Box Office, Inc., a subsidiary of Time Incorporated. We were the nations first, and are today its largest pay television company. Our satellite delivered program services, HBO and Cinemax, serve over 18 million subscribers in all fifty states.

I am pleased to be here today at the Committee's invitation to testify on the background and implications of our decision to scramble the signals of our national satellite program services, and the long term benefits which we believe that decision will bring to the American television viewer.

As a preliminary matter, I want to discuss two points.

First, as has been widely reported, last week "Chaptain Midnight" was arrested and pleaded guilty to intentionally jamming HBO's satellite transmission earlier this year. This reprehensible act has been widely and propertly condemned. I want to express my gratitude to the FCC and the Federal Bureau of Investigation for their relentless pursuit of "Captain Midnight." The FCC and the FBI realized, as did many member of Congress; that Captain Midnight's actions treatened not only HBO's signal transmission, but the integrity of this nation's entire domestic satellite system. I want to also stress that we cannot simply rest with the apprehension of Captain Midnight. Strong measures to enhance satellite transmission security are needed and I am gratified that the FCC is planning a notice of inquiry to investigate the matter.

Second, in the interest of clarify and perspective, I would like to briefly sketch HBO's pioneering role in satillite communications. Home Box Office began program transmission on November 8, 1972, to fewer than 400 subscriber homes in one Pennsylvania cable system. The bill of fare that night was one very dated movie, "Sometimes a Great Notion," and a New York Rangers hockey game. By 1975 we had grown to 195,000 subscribers serving a four-state area. The programming was distributed by microwave links and each new link required separate FCC approval.

On September 20, 1975, HBO took the historic step of delivering the first satellite television program service to cable systems in Fort Pierce, Florida and Jackson, Mississippi. The commonplace availability of satellite program services today sometimes obscures the extraordinary foresight and enormous financial risk associated with the commencment of HBO's satellite transmissions. Many people considered the decision foolhardy. Obviously they were wrong. HBO has been one of the truly significantly technological achievements of American business over the past 10 years. The decision to distribute HBO via satellite revolutionized the television business and made possible a wealth of programming choices that comprised the stuff of dreams prior to 1975.

A closely related development was the FCC's authorization in December 1977 of receive-only station dishes as small as 4.5 meters in diameter. This brought satellite service within reach of even the smallest cable television systems with dramatic effect upon the cable and equipment manufacturing industries. In addition, it was a critical factor in eventually making small earth stations practical for individual homeowners. Again, HBO was there. The record reflects that we played a leadership role in urging the FCC to take that critical deregulatory step.

Suddenly, cable television—an industry that some hardly considered an industry at all—became a vast, interconnected panorama of satellite networks. The disparity between large system operators and small operators evaporated, because the small operator discovered that he too could afford an earth station—even two earth stations—to offer his subscribers the same services that the larger systems were headlining. And, most importantly, cable subscribers in rural and small-town America had more television than residents of many large urban areas which remain unwired today.

In July of 1982, following a major joint effort by HBO and Hughes Communications Company, the FCC approved domestic fixed satellite tarnsponder sales. We successfully argued that by limiting the allocation of fixed-satellite tarnsponders to lease arrangements, the FCC effectively favored only existing participants, because such regulation created substantial barriers to entry for smaller and newer firms.

Also in 1982, long before TVROs had proliferated throughout America, HBO made yet another critical strategic and financial decision related to its use of satellite technology. We made the commitment to scramble our services. We did so for one very fundamental reason: to protect our programming from an evergrowing universe of privately owned satellite dishes that could receive our programs free of charge and from commercial establishments that unlawfully intercepted and resold our signal for profit. We could ill-afford this in light of the high costs of acquiring programming for our services.

This brings us to October of 1984 when members of this Committee and their counterparts in the House Energy and Commerce Committee requested us to join in an effort to resolve the legal controversies that had surrounded the unauthorized use of satellite programming by owners of earth stations. HBO actively participated in that effort and the final statutory language which was worked out. The compromise, contained in Section 705 of the Communications Act, provides that if a program supplier wishes to assert control over distribution of his product he must go to the trouble and expense of scrambling his signal.

I believe the anti-scrambling bills before this Committee, S. 1618, S. 2290 and S. 2666, are ill-advised and would, if enacted, have a devastating impact upon our business and the program production community. In addition, these bills are very harmful to consumers because they perpetuate an air of uncertainty surrounding scrambling. This prevents consumers from making rational economic decisions and as a result the entire industry suffers.

The confusion is beginning to subside. Consumers are starting to understand that scrambled services are available, prices are reasonable, the subscription process is convenient and the technology is efficient. The demand for TVRO equipment has, in fact, restarted; however, the overhanging threat of legislation to disrupt this orderly process continues to be inconsistent with the best interests of all parties: satellite programmers, cable operators, TVRO manufacturers, TVRO retailers and most of all, consumers.

I. THE MARKETPLACE HAS WORKED QUICKLY AND EFFICIENTLY TO THE BENEFIT OF CONSUMERS

Mr. Chairman, my testimony contains a great deal of detailed information about HBO's business plan, technology, the history of scrambling and other important issues. However, scrambling has now been a reality for six months and I believe the public policy debate has evolved to one central question: is the marketplace working? The answer to that question is an unequivocal 'yes.'

Scrambling opponents continue to rely on hysterical accusations about unfair practices on the part of satellite programmers and cable operators. I have heard before and undoubtedly will hear again today that HBO's prices are unreasonable or that its marketing scheme is not competitive. These claims are baseless. Frankly, as a businessman in an intensely competitive environment I am more concerned with the only voice that counts—my customers and potential customers. Their message is clear—they accept scrambling and now whoever offers the best programming at the best price will get their entertainment dollars.

Understandably there was initial unhappiness among TVRO consumers about paying for service they were previously getting free, although it was clearly unreasonable to expect that they would continue to get free programming and that we would continue to give our services away to millions of people. But, consumers have come to terms with scrambling. The marketplace has worked.

This is not rhetoric. It is subject to verification with numbers and facts. The evidence on scrambling is in and, frankly, it strongly supports the course which we, M/A-COM, other programmers and increasing numbers of TVRO owners have taken. The clear indicia that the marketplace has worked can be divided into the following categories: 1) TVRO consumer satisfaction, 2) price competition, 3) packaging of scrambled program services, 4) positive developments for TVRO retailers, and 5) source competition.

A. TVRO consumer satisfaction

TVRO consumer satisfaction is the strongest and most direct evidence of an effective marketplace. In the six months since HBO began scrambling, we have signed up over 20,000 TVRO homes. These TVRO consumers have purchased 34,000 pay units (HBO and Cinemax). Recently, the sign-up rate has escalated. Over 1,500 new TVRO families are subscribing to HBO each week. Mr. Chairman, these statistics do not suggest an unhappy consumer. To the contrary, over 1,500 TVRO owners a week are telling us that scrambling is acceptable; the system works, the prices are fair and they are happy with the service.

Even those who most vigorously opposed scrambling are recognizing that their "doomsday" fears have not come to pass. Instead, rational maketplace dynamics have created an environment that is attractive for TVRO owners. Some months ago, as a protest to our decision to scramble HBO and Cinemax, the satellite guide OnSat dropped the program listings for those services. In its most recent issue, however, OnSat reversed its decision and once again is carrying HBO and Cinemax program listings because "more and more of our readers are obtaining Videocipher IIs."

Moreover, our internal survey of our residential TVRO consumers indicates a strong acceptance of scrambling and significant satisfaction with the service and the technology. Three-quarters of our TVRO subscribers believe they are receiving fair value for their monthly subscription. Almost 90 percent expressed overall satisfaction with the descrambling equipment and over 85 percent believe the authorization process worked efficiently. Less than five percent of the TVRO consumers had experienced billing difficulties. Overall satisfaction is very high.

Under any sort of consumer satisfaction analysis these statistics are very positive. In light of the fact that this business is only six months old, involves a sophisticated new technology and a novel marketing scheme, these survey results are extraordinary. Mr. Chairman, we are very proud of the way our TVRO business has developed. Under very difficult circumstances we have been able to sort out the technology, the marketing and the pricing in a way that is not only satisfactory but attractive to consumers. And, we have done this in only six months. Any businessman would be proud of this achievement.

B. Price competition

In addition to the significant and growing consumer enthusiasm about scrambled program services, there are other strong indications that the marketplace is working. Chief among these is vigorous price competition, a traditional indicia of a healthy, pro-consumer marketplace.

The marketplace mechanics on price are really quite dramatic. On January 15, 1986, HBO began selling HBO or Cinemax for $12.95 per month or both services for $19.95. In May, only four months later, HBO's chief competitor, Showtime/The Movie Channel, began selling its services for $10.95 per month, or a combo price of $16.95. Within a month, HBO countered. On June 11, we announced a 16% discount for yearly TVRO subscriptions which brought the effective monthly rate for HBO or Cinemax down to $10.79 and the monthly combo price down to $16.63.

Mr. Chairman, if that is not price competition then I am at a loss to describe what is.

Further, as described below, a number of TVRO program packages have been developed and the prices vary widely. All in all, there are surprisingly a large number of services and price options available to TVRO consumers considering the short time since scrambling began. Again, strong evidence of an effective, pro-consumer marketplace.

C. Packaging scrambled satellite program services

Recently, some scrambling opponents have argued that the marketplace has failed to develop a mechanism for packaging scrambled satellite services. This concern is misplaced and results from a misunderstanding of the pricing structure that has emerged for these services. If one carefully analyzes pricing of scrambled satellite services, it is apparent that a TVRO owner can "self-package" services at a rate that is no greater than and, in fact, often less expensive than a cable subscriber pays for a similar mix of services.

For example, a TVRO owner can get HBO and Cinemax (under HBO's discount plan) for $16.63 per month. The basic service prices are considerably lower—about $2 per month. Thus, the TVRO owner could get 10 basic services for $20 per month. So, he would pay $36.63 for two pay services and ten basic services.

By comparison, an Arlington County cable subscriber pays $36.20 for two pay services and basic service (including nonsatellite services).

And, the TVRO owner has much greater flexibility in two ways: 1) he gets to pick the specific basic services he wants, and 2) his ability to modify his rates is greater. For example, a TVRO owner could decide to buy eight basic services and two pay services for $32.60; or six basic services and two pay services for only $28.60. Both of these options put him in substantially better position than the cable subscriber.

In addition to the substantial flexibility "self-packaging" affords TVRO owners, a number of entities have already put together satellite program service packages. Cable operator TCI, for example, offers a package which includes 10–15 basic services, two pay services and rental of a descrambler for $23.50 per month. Consumers who already own a descrambler can get the service package for $17.50 per month. United Cable has a similar package of basic services, two pay services and descrambler rental for $29.95 per month.

Other entities are actively seeking to establish competing service packages. In fact, HBO is involved in very serious negotiations to create a package of satellite program services at attractive rates for TVRO consumers. Showtime/The Movie Channel, United Video, Viewers First National and the National Rural Electric Cooperative Association are also attempting to create TVRO service packages.

It is evident that TVRO consumers already have available a significant number of program services packages. Moreover, the options available to TVRO consumers are growing rapidly. The market is working quite well.

The chart on the next page provides a brief sketch of the options available to TVRO owners and how these options stack up against cable subscriber options.

TVRO vs. Cable packaging/pricing options

	Month
(1) TVRO options:	
Self-Packaging:	
HBO plus Cinemax plus 10 basic services	$36.63
HBO plus Cinemax plus 8 basic services	32.63
HBO plus Cinemax plus 6 basic services	28.63
TCI Package:	
2 pay services plus 10–15 basic services plus descrambler	23.50
2 pay services plus 10–15 basic services	17.50
United Package: 2 pay services plus 10 basic services plus descrambler	29.95
(2) Typical cable subscriber options:	
Arlington County cable subscriber: Two pay services plus basic service (including nonsatellite services)	36.20
National average cable subscriber: Two pay services plus basic service (including nonsatellite services)	31.16

Of course, the packaging issue also raises the question of convenience—does a TVRO owner have to make multiple telephone calls to receive multiple services. However, HBO has already put together a "one-stop-shop" mechanism. Now TVRO owners can call one number to receive HBO, Cinemax, CNN and Headline News. HBO is working to expand the "one-stop-shopping" mechanism to include other program services. We are confident that we will soon be able to offer TVRO owners multiple program services with one telephone call.

D. Positive developments for TVRO retailers

Positive marketplace signs are also surfacing for TVRO dealers. After a several month slump, TVRO sales have begun to pick up again. Since January 1986, the monthly TVRO sales rates have risen steadily. In fact, the total TVRO sales for the month of April doubled the total sales in January. While these sales figures remain lower than the comparable monthly sales figures for 1985, there is every reason to believe sales will continue their current upward trend. One recent survey estimated that by the end of 1986, TVRO sales will approach 70,000 per month, equal to the highwater mark of TVRO sales during the boom years of 1984 and 1985. This same survey indicated that by mid-1987, monthly TVRO sales would climb to 75,000, thus exceeding the industry's highest previous sales records.

These statistics suggest an industry that is stabilizing and looking toward renewed growth. Over the long term, we believe scrambling will prove a very positive development for TVRO retailers.

In addition, last month HBO announced an incentive plan to encourage TVRO retailers to sell descramblers. Under the program, HBO will pay a $30 bonus to any TVRO retailer that sells a descrambler to a consumer who then purchases HBO and Cinemax. This additional revenue source demonstrates HBO's recognition that the TVRO retailer plays an important role in the TVRO subscription business. It also underscores our commitment to aggressively market our services to TVRO owners.

E. Source competition

The marketplace is also producing source competition. Cable operators do not have a monopoly in the provision of scrambled satellite program services. On the contrary, HBO will not authorize any entity, including the cable operator, to offer its scrambled services on an exclusive basis. Even inside cable franchise areas, HBO offers an alternative to the cable operator through its direct 800 telephone number system. The assertion that cable operators will in effect monopolize the provision of scrambled services within franchise areas is false. Over 60% of our TVRO subscribers have subscribed directly through HBO without dealing through a cable operator. Consumers have choices—there is no monopoly and no exclusivity associated with the offering of scrambled satellite services.

Assertions of monopolization or anticompetitive practices are totally without foundation and reflect a basic misunderstanding of our business. However, to the extent that scrambling opponents disagree, Congress has adopted a body of law to deal with such problems—the antitrust laws. It is well-known that the Department of Justice has initiated a formal investigation into scrambling. We are confident that the investigation will not result in any adverse action on the part of the Department of Justice. However, that is the appropriate forum for these questions and pending resolution of the investigation, no Congressional action is necessary or appropriate.

Finally, as I have consistently stated, HBO will continue to reexamine its distribution policies as the TVRO business develops and, if conditions warrant, the policy may be changed. We have not foreclosed additional distribution methods and are always open to discuss credible alternative business plans which offer us appropriate economic incentives without substantially harming our existing business.

We are particularly interested in discussing possibilities for additional mechanisms to serve rural TVRO owners. A number of entities have solid experience serving rural America and could perform the necessary packaging, marketing and related services for TVRO owners.

Last month, for example, the National Rural Electrification Association (NRECA) testified before the House Telecommunications Subcommittee that it would like to offer a package of satellite program services to rural TVRO owners. While we are interested in discussing this, I must say that we are somewhat concerned with NRECA's initial approach to this business. To say the least, it is unusual that NRECA should announce its TVRO marketing plans in a Congressional hearing prior to sitting down with HBO and the other programmers with whom it wants to go into business. Moreover, it has been almost two months since that hearing and HBO has still not been contacted by NRECA. More importantly, NRECA's assertion at the hearing that a package of cable services, including premium services like HBO, could be offered for ten dollars per month, reflects a very significant misunderstanding of the economics of our business.

Nonetheless, we are genuinely interested in talking with NRECA or others, if their business proposal makes sense. As I have said, our door is open.

II. RATIONALE FOR SCRAMBLING

I mentioned earlier that HBO made its decision to scramble its HBO and Cinemax satellite program services in 1982. Initially, the decision was motivated by a simple, straightforward desire to protect the integrity of the satellite signals, HBO's investment in programming and the investment of our paying subscribers in the form of monthly bills. As legal, technical and marketplace developments occurred over the past four years, a number of additional reasons for scrambling arose, including the opportunity to extend HBO's subscriber base to include earth station owners, pressure from program copyright owners to protect their product from unauthorized use and passage by Congress of Section 705 of the Cable Act which, in effect, requires programmers to scramble their services.

HBO and Cinemax are pay television services. However, advancements in technology were permitting widespread, unauthorized and illegal reception of the services without payment.

Commercial theft of the program services has been and continues to be a particularly acute problem. Bars, restaurants, multi-unit dwellings, hotels and motels routinely intercepted HBO and included the service as part of their commercial offerings, sometimes charging a separate fee for HBO. During the late 1970s and early 1980s, HBO undertook a series of lawsuits challenging commercial theft of its services. These lawsuits were successful and established clearly the illegality of unauthorized interception of our signals. In a 1981 theft-of-service case, District Court Judge Abraham Sofaer found very little sympathy for commercial signal pirates: "There is no countervailing social or policy consideration that would justify protection for their exploitative business operation." *HBO* v. *Advanced Consumer Technology, Movie Antenna, Inc.*, 549 F. Supp. 14, 25 (S.D.N.Y. 1981). Similarly, two federal Circuit Courts held squarely that unauthorized commercial reception of satellite program services violated the signal theft prohibition in the Communications Act. *National Subscription Television* v. *S + H TV,* 644 F. 2d 820 (9th Cir. 1981); *Chartwell Communications Group* v. *Westbrook,* 637 F. 2d 459 (6th Cir. 1980).

However, because of difficulties in detection and insufficient penalty provisions, commercial theft did not subside. It continued to be an extremely serious problem, creating a yearly drain on the industry's revenues of millions of dollars and resultant upward pressure on consumer rates. It is a problem which we believe can only be solved technologically by scrambling the satellite signal. It is, of course, a problem that afflicts the MDS distributor and the cable operator as well.

Since HBO's 1982 decision to scramble its services, the number of individuals who can receive satellite signals through backyard earth stations has grown considerably. This growth is attributable in part to the practice of selling earth stations without notifying consumers about the pendency of scrambling and their obligation to pay to receive scrambled signals. It is estimated that there are nearly 1.5 million private earth station owners today. Unlike the early days of this technology when earth station sales were confined largely to rural areas, earth station owners can now be found in urban and suburban areas. This growing population of earth stations has provided another strong reason for scrambling. HBO wants to sell its services to earth station owners.

These earth station owners represent an opportunity for all cable programmers to extend the reach of their services. It was simply prudent business to develop a technical and marketing system to offer our services to these consumers. Nobody seriously disputes HBO's right to charge earth station owners for receipt of its services. Likewise, nobody seriously believes earth station owners will pay a monthly fee for the services if they are unscrambled and essentially "free" for the taking. Therefore, the only practical solution was to scramble the signals and offer them at prices which will attract earth station owners. That is precisely what we have done.

Finally, Congress provided another strong incentive to scramble satellite program services. Section 705 of the Cable Act provides that the signal theft laws shall not apply to the private unauthorized reception of satellite program services unless the programmer either (1) scrambles his signal; or (2) establishes a marketing system to offer the services to earth station owners. In effect, Congress said that programmers may not control their product and that their product may be freely expropriated unless the programmer takes one of these two specified actions. In addition to the reasons for scrambling stated above, Section 705 left programmers no choice. We simply cannot tolerate a business environment where the product we are selling may be obtained easily and without payment. Congress, in enacting Section 705, forced programmers to scramble their signals to protect their product.

III. DEVELOPMENT OF SCRAMBLING SYSTEM

The development of the scrambling system began in 1982 with the issuance of a request for scrambling system proposals. After 20 different manufacturers of satellite communications equipment were alerted of this request, 11 companies elected to examine the request for proposal. HBO eventually received a total of eight responses to the RFP.

After an initial assessment process, we began an in-depth examination of the three proposals which conformed most closely to HBO's seven main selection criteria.

Those criteria included the system's overall technical sophistication and degree of security, the cost of the system, the incorporation of proven rather than experimental technology and the adequate demonstration of system reliability and performance.

We also assessed each bidder's general familiarity with the cable industry (with particular emphasis on knowledge of industry equipment specifications and security goals) as well as their manufacturing capabilities and commitment to precise production and distribution timetables to insure that they would be able to serve multiple programmers.

Bearing in mind the rapid development of home TVRO technology, HBO decided that a bidder's ability to make design improvements that would result in affordable consumer descrambling equipment would also be a crucial selection criterion.

Only after we completed this exhaustive solicitation and review process did M/A-COM emerge as the vendor of choice for HBO's scrambling system.

We believe that the wisdom of this decision has been supported over time considering M/A-COM's willingness to (1) insure that each consumer descrambler would accommodate a broad array of programming services, (2) amend its designs to insure a high rate of compatibility with home TVRO systems, (3) provide detailed specification to other manufacturers to accommodate any retrofitting of existing home TVRO equipment and to allow future generations of this equipment the ability to accept "plug-in" descrambling modules, 4) license its technology to other equipment manufacturers and 5) operate the consumer descrambler authorization computer center in an attempt to encourage other programmers to use this central, not-for-profit facility.

IV. HBO BUSINESS PLAN FOR SERVING EARTH STATION OWNERS

HBO's business plan for serving home earth station owners has three distinct elements: 1) a marketing system containing the terms and conditions under which HBO will offer the scrambled services; 2) the technical process for delivering the scrambled signal and authorizing consumer descramblers; and 3) a consumer public awareness campaign to explain scrambling.

A. Marketing system

The philosophy underlying HBO's TVRO marketing system is tied directly to the reasons for scrambling. As noted, a significant reason for HBO scrambling its services was to begin to serve earth station owners in some rational way. HBO very much wants and intends to extend its current base of 18 million subscribers to include the 1.5 million private earth station owners.

The HBO marketing plan was developed with a keen recognition of the concerns of Congress as well as marketplace forces. We worked diligently to keep members of Congress advised of our intention to scramble and the specific plans for offering the scrambled services to earth station owners. We met early and often with members of Congress who had expressed an interest in scrambling. In fact, we incorporated a number of specific suggestions from members of Congress into our business plan.

We created a business plan which is technically efficient, easily understood by consumers and fairly priced. Our experience since full-time scrambling began on January 15 supports this conclusion. Specifically, the marketing plan has two basic elements:

(1) Outside cable franchise areas, HBO will sell its service directly to earth station owners via a toll-free 800 telephone number. Consumers will have to purchase an earth station and a descrambler much as they would any piece of consumer hardware, such as a television set or videocassette recorder. Both earth stations and descramblers are widely available from a variety of retailers. The consumer will then simply call the 800 HBO number, provide minimal billing information and the serial number of the descrambler, and HBO will arrange for the descrambler to be activated from a central computer.

(2) Inside a cable franchise area, HBO will authorize the local cable operator on a non-exclusive basis to perform the authorization procedure above. The consumer will purchase an earth station and a descrambler and call the local cable operator who will arrange activation of the descrambler. Local cable operators are in the best position to retail the HBO services for several reasons. HBO has a pre-existing business relationship with cable operators, so billing and other administrative functions can be handled more easily and efficiently. Moreover, cable operators are familiar with HBO and Cinemax and are engaged in ongoing marketing and advertising of the services. Finally, the cable industry offers a stable business environment which HBO can rely on today and in the future. Franchised cable companies, which are not only heavily capitalized but also subject to the scrutiny of franchising authorities, have, for the most part, proven to be financially stable and reliable affiliates. Our experience with less substantial companies—namely MDS operators—has been far less satisfactory. For example, over the last year four MDS affiliates of HBO (20% of HBO's MDS affiliates) have filed bankruptcy proceedings. In short, this experience has reaffirmed our conviction that the cable industry provides the most effective and reliable distribution system for our products.

However, it should be emphasized that under our policy cable operators do not have an exclusive right to distribute the HBO services to earth station owners. Should a consumer within a franchise area not wish to subscribe through the local cable operator, HBO will authorize receipt of its services directly through the 800 telephone number.

For consumers who are authorized through the HBO 800 telephone number, the price will be $12.95 per month for HBO or Cinemax, and $19.95 per month for both services. Also, as I stated above, consumers who sign up for HBO or Cinemax for a year will receive a 16% discount, making the effective monthly rate for either service $10.79 and for both $16.63. Cable operators are free to establish their own prices for consumers they serve and some are already selling HBO and Cinemax at lower prices.

B. Technical delivery and authorization process

Although the process for authorizing receipt of HBO's services is technically driven and involves a series of complicated computer applications, from the consumers standpoint it is easy to obtain authorization. Literally, an earth station owner must do only two things:

(1) Obtain a Videocipher II descrambler which has a suggested retail price of $395; and

(2) Call the HBO telephone number or the local cable operator and provide minimal billing information and the descrambler serial number.

The descramblers are available from a number of sources, including earth station retailers, cable operators, M/A-COM and other retail distributors of consumer hardware. In addition, Channel Master, a national distributor of earth station equipment, will provide a descrambler directly to an earth station owner, and can do so within 48 hours.

Once a consumer obtains a descrambler and calls the HBO 800 telephone number he is authorized and can receive an unscrambled picture in less than ten minutes.

Although authorization is extremely simple and straightforward for consumers, it is a technically sophisticated system and it may be useful to the Committee's consideration to describe it in more detail. Once the HBO activation center receives the necessary information from the earth station owner, it transmits that information by telephone line to a billing computer facility, run by Cabletek in Sewaren, New Jersey. The computer in New Jersey then transfers the information, again via telephone line, to the M/A-COM computer facility in La Jolla, California. The M/A-COM computer integrates the information into a unified data stream and sends it by telephone line to the HBO uplink facility in Hauppauge, Long Island. The information is inserted into the HBO signal, sent to the satellite and then distributed nationally. The authorization for each individual descrambler is contained in the HBO signal. The signal is received by an earth station and as it is passed through the descrambler it "recognizes" the descrambler and the signal is descrambled.

The descrambler information travels 55,000 miles from the HBO activation center to New Jersey, out to California, back to Long Island, up to the satellite, back down and to the descrambler. Incredibly, this process takes less than a second.

The performance of the M/A-COM descrambler and the authorization process have far exceeded our expectations. Since January 15, both the equipment and the authorization process have performed almost flawlessly.

c. *Consumer public awareness campaign*

HBO was particularly careful to inform consumers of its intention to scramble and to explain the terms and conditions for offering the services to earth station owners well in advance of the commencement of full-time scrambling. In fact, early in the process HBO informed members of this Committee that it had two self-imposed conditions which must be met prior to full-time scrambling: (1) the scrambling system must be fully tested and operating efficiently; and (2) there must be a sufficient number of descramblers available to satisfy consumer demand.

These criteria served to inform consumers and to provide a considerable transition period for consumers to prepare for scrambling. HBO tested its scrambling system on a part-time basis for six months, taking care, as far as possible, to avoid scrambling of the most popular, prime-time programming. In addition to accomplishing our technical goals, providing a scrambled picture on a part-time basis was the best method of informing and reinforcing for consumers HBO's commitment to scrambling.

HBO also conducted a multifaceted campaign to fully and accurately inform earth station owners and potential owners about scrambling. This extensive consumer awareness campaign included the following elements: 1) informational spots appearing regularly on the HBO and Cinemax services; 2) a "hotline" telephone number to answer any questions from earth station owners; 3) information about scrambling provided to over 4,000 general circulation newspapers; 4) our executives were freely available and encouraged to participate in radio talk-shows on scrambling; 5) numerous meetings with members of Congress to assist them in explaining scrambling to their constituents; 6) meetings with SPACE officials to provide information that would have been useful if passed along to its membership; and 7) attempts to advertise widely in the satellite program guides used by earth station owners.

In short, HBO extended itself for six months prior to fulltime scrambling using a number of outlets and a variety of methods to provide consumers with the information they needed to make informed choices about scrambling. The earth station industry, on the other hand, responded with misrepresentations, inaccurate and confusing innuendo and petty refusals to provide consumers with information on scrambling. For example, a number of the most popular satellite program guides initially refused to accept HBO's consumer information advertisements. Publications with a circulation of 500,000 TVRO homes rejected HBO's ads and, in so doing, seriously undermined consumers' ability to understand scrambling. Undoubtedly, this activity, as well as the practice of TVRO retailers to sell TVROs with misleading or often no information at all about scrambling, was a primary cause of consumer confusion.

V. PUBLIC POLICY CONSIDERATIONS

A number of public policy concerns in addition to those already discussed above have been raised by scrambling opponents. Many of these considerations were carefully considered and factored into the technical and marketing development of HBO's scrambling system. The remainder have either been overtaken by market developments and therefore rendered irrelevant or have simply proven to be false.

(1) Consumers will not have to purchase a different descrambler for each satellite program service they wish to receive.—The M/A-COM Videocipher II system has become the industry scrambling standard. In addition to HBO and Cinemax, a large number of program services have announced their intention to scramble and use the M/A-COM system, including Showtime, The Movie Channel, WTBS, CNN, Headline News, Disney Channel, Christian Broadcast Network, MTV, Nickelodeon, Nashville Network, Black Entertainment Television, USA Network, VH-1 and Satellite Program Network. The marketplace has worked quickly and effectively and as a result consumers will only have to purchase one descrambler to receive all of these services.

(2) The price HBO will charge for its scrambled services is reasonable.—$12.95 per month is comparable to what the average cable consumer pays for HBO. Moreover, it is significantly less expensive than some consumers pay. In Washington, D.C., for example, consumers pay $17.95 per month for HBO via the Marquee MDS distributor. $12.95 per month for HBO is very close to the monthly fees paid by subscribers to the Washington Post, The New York Times or The St. Louis Post-Dispatch.

It should also be noted that comparisons between prices paid by cable operators, cable subscribers and earth station owners are all somewhat inapposite. The economic structure and attendant administrative costs of these three entities are very different. For example, HBO has contracted for an unaffiliated entity to provide billing services for all its customers, including earth station owners. It costs HBO the same amount for processing a check from a cable operator who delivers 50,000 subscribers.

Finally, cable operators may set their own prices to earth station owners and many have already established charges substantially below $12.95.

(3) There are a sufficient number of descramblers available to satisfy demand among earth station owners.—Since January 15, when HBO began scrambling, M/A-COM has produced 75,000 descramblers. Approximately 30,000 descramblers have been purchased and activated, leaving 45,000 in inventory. M/A-COM has shipped descramblers to satisfy all the orders for release it has received. Descrambler availability is simply not a problem and never has been.

Apparently some TVRO retailers have been unable to follow up their initial sale of an earth station by providing their customers with a descrambler. However, if those dealers do not have descramblers, it is because they failed to perceive their customers' needs and did not order them.

(4) The price of the consumer descrambler is reasonable.—SPACE proves this point. It attempts to argue that there are an insufficient number of descramblers available, by pointing to demand among earth station owners. That demand proves the reasonableness of the descrambler price. In addition, like any piece of consumer hardware, the initial price of the descrambler reflects development costs and will likely go down over time, depending on consumer demand. The Videocipher II descrambler offers very sophisticated encryption protection. In the past, simpler and less expensive scrambling methods were easily broken. Inexpensive "black boxes" were readily available to defeat the scrambling codes. Videocipher II provides a much tougher scrambling standard and that costs more.

(5) At HBO's urging, the M/A-COM scrambling system wasa designed to be compatible with over 90 percent of home earth stations.—There are a very large number of earth station models available today and a wide range of quality. Nonetheless, HBO has always had as a criteria for a scrambling system that it be broadly compatible with that variety of earth stations. The M/A-COM scrambling system satisfies that criteria and is capable of delivering a descrambled picture with the overwhelming majority of earth stations. The small number of incompatibility problems that do exist are attributable primarily to cheap earth stations that deliver a poor quality signal and therefore have difficulty handling scrambled signals.

(6) The airwaves may be "free," but HBO's programming is not.—SPACE has acknowledged publicly and frequently that its membership does not oppose paying for HBO's services. The airwaves are merely a medium through which HBO transmits the product it sells—programming. Nobody can seriously dispute HBO's right to charge for its program services.

(7) Section 705 of the Cable Communications Policy Act does not require satellite programmers to negotiate the price for such services individually with earth station owners or with a group representing earth station owners.—There is absolutely no support for such a position in the statute and the legislative history relied on by proponents of this plan is weak and strained. The practical difficulties of requiring such individual negotiations are self-evident and it is inconceivable that Congress would have adopted such a novel approach without ever mentioning it. Moreover, a traditional marketplace negotiation is actually taking place now. HBO has established a price for its services. Consumers have the option to take these services or not and HBO will respond to this marketplace reaction. A government-gerrymandered negotiation is unworkable and unnecessary.

(8) No U.S. tax dollars were used to build, launch or maintain the satellites by which the program services are distributed.—These satellites have been put into space by private enterprise and not government subsidization. The notion that satellite program services could not have developed without expenditure of tax dollars on the space program and that as a result consumers are entitled to subsidized rates for satellite program services is specious. It is like saying consumers should get free or subsidized velcro because it was developed originally for use in space, or free personal computers because computer technology was advanced as part of the U.S. defense research.

XVI. CONCLUSION

HBO is selling its HBO and Cinemax program services to TVRO owners. In so doing, it recognizes a longstanding congressional desire to make the services available to millions of Americans, particularly those in rural areas. The prices for the services are reasonable. The technology and authorizations process are easily understood by consumers and working efficiently. More importantly, consumers have choices—they are not locked into any single entity to obtain descramblers or program authorization. There is no exclusivity in the provision of equipment or programming.

Government intervention now would be counterproductive. HBO has already welcomed over 20,000 earth station families to join its over 18 million subscribers. More are being authorized every day. Consumers now have specific scrambling marketing plans before them. They have the information they need to make informed choices. They are competent to make those choices.

Government regulation would inject an unknown set of complications and severe costs; costs that would ultimately be borne by consumers. This is particularly true of the bills now before Congress which would probibit scrambling altogether or force a complex and costly rate regulation structure on this new business. Such extreme measures are unnecessary. The marketplace is working now to provide consumers with the services they want at prices they can afford.

Mr. Chairman, I have today spoken of several successful business and technological initiatives by HBO but we have had our setbacks as well. I am always mindful of the fierce competitive instinct which is perhaps the essential element of the American character. It is that instinct and the relentless search to better understand and repond to the needs of the television consumer that has driven all our decisions in the satellite area. We believe as well that ll of those decisions have been and continue to be in the public interest.

Thank you for your attention, and I will be pleased to answer any questions you may have at the appropriate time.

[The following information was subsequently received for the record:]

U.S. Senate,
Committee on Commerce, Science, and Transportation,
Washington, DC., August 22, 1986.

Mr. Michael J. Fuchs,
Chairman and Chief Executive Officer, Home Box Office, Inc., Avenue of the Americas, New York, NY.

Dear Mr. Fuchs: I am in receipt of the enclosed August 7 letter from HBO which included the rate card I requested at the recent Senate hearing on the issue of satellite television signal scrambling. Thank you for that information. It will be made part of the hearing record.

As I indicated at the hearing, there are several other questions I would like to explore in greater detail. They are enclosed. In order to avoid unnecessary follow-up questions, please be as forthcoming as possible in addressing them. The questions, correspondence, and your reply will all be made part of the hearing record. Should you have any questions or need further clarification regarding the enclosed, please feel free to contact my office.

Sincerely,

Larry Pressler, *U.S. Senator.*

Enclosure.

Questions of Senator Pressler to HBO

(1) Enclosed are copies of two letters written by Mr. Michael L. Pandzik, Executive Director of National Cable Television Cooperative, Inc. One is dated August 5, 1986, addressed to me. The other is dated August 4, 1986, addressed to you. Each will be made part of the record. Although the following questions will address some of the specific issues raised in those letters, I would appreciate it if you could supply for the record your general response to the August 4 letter, and the points raised in the August 5 letter.

(2) In your testimony you stated that you have negotiated with cable co-ops. But then you seemed to indicate that this kind of grouping was an "artificial device" designed to obtain volume discounts, and that your problem with dealing with a co-op stemmed from an absence of common ownership. My reading of your position is that you would not give cooperatives the same effective rate discounts as you would a large MSO with a comparable number of subscribers. My question is three-fold: Is that an accurate interpretation of your position, and if not please clarify it for me? What, if any, efficiencies do you realize through dealing with a single company that cannot be duplicated through dealing with a single cooperative? If a co-op can deliver to you the same number of subscribers as a single MSO, with single billing and other efficiencies, is it justifiable to engage in price discrimination of the effective rate?

(3) The HBO wholesale rate card, dated April 1, 1985, is incomplete in that it does not include the deepest volume discounts you make available to the largest MSOs. I am told that your wholesale price also varies as to the retail price charged. I also understand that there is a wide difference between the lowest "contract" monthly per-subscriber service charge, and what we may call the lowest "effective" monthly per-subscriber service charge.

I have been told that your contracts with major MSOs are often accompanied by "side" letters that detail other financial incentives such as free program guides, advertising co-op funds, marketing dollars and other forms of financial support. It is also likely that your largest MSO accounts have annual fee "caps," wherein they pay only up to a set maximum amount, with new or acquired subscribers being essentially free.

Keeping in mind these comments and the points raised in the enclosed letters, what is the lowest contract monthly per-subscriber service charge, and what is your best estimate of the lowest effective monthly per-subscriber wholesale service charge to the following purchasers (It is my hope that HOB does not continue to refuse to supply specific price or actual discount percentage information based on the argument that it is "proprietary information which would cause problems in negotiating. If your "volume discounts" are truly based on objective criteria, such as the number of subscribers, making this information public should not pose a substantial problem. If others meet the same objective criteria as the large MSOs, should they not be entitled to the same effective price?):

	Lowest monthly contract service charge	Lowest monthly effective service charge
TELECOMMUNICATIONS, INC. (TCI)		
Monthly retail rate:		
$8.00		
$10.00		
$12.00		
AMERICAN TELEVISION & COMMUNICATIONS, INC. (ATC)		
Monthly retail rate:		
$8.00		
$10.00		
$12.00		
A SMALL CABLE COMPANY OR OTHER INDEPENDENT PROGRAM PURCHASER WITH 10,000 CABLE OR TVRO SUBSCRIBERS		
Monthly retail rate:		
$8.00		
$10.00		
$12.00		

(4) Recognizing your past reluctance to disclose the details of "off-card" discounts, side letters, advertising funding, marketing support etc., could you for the record at least confirm whether HBO does engage in these practices and if so please list the types of practices in which you have engaged that would lower what I have termed the "effective charge" paid by your largest MSO customers?

(5) The National Cable Television Cooperative, Inc., headquartered in Overland Park, Kansas, is a national, not-for-profit purchasing organization composed of independent (non-MSO) cable television system owners and operators. This group was formed in late 1984 with the express intent of combining their individual purchasing powers to attempt to achieve economies of scale commensurate to their combined size.

This group has offered to meet reasonable, defensible and business-like standards in order to achieve the volume discounts you would award them were they a "single" MOS. The NCTC currently has more than 750,000 basic subscribers, of which approximately 250,000 take the HBO network.

You testified that the national average retail rate for HBO was approximately $9.70. According to the HBO wholesale rate card dated April 1, 1985, the monthly service charge due to HBO from a small operator (with less than 10,000 HBO subscribers) at the $9.70 retail rate would be $5.41 per month.

What would a single MSO with 250,000 HBO subscribers pay on a monthly retail rate of $9.70?

(6) In testimony, you mentioned that deep wholesale volume discounts were awarded on the basis of "size" and "performance." If a new company were formed today, and came to you with 250,000 new HBO subscribers, would you require "performance" criteria, or simply grant them the volume discount due to the owner of 250,000 HBO subscribers?

(7) You testified that the use of volume discounts is a common practice in American business. No one disputes that. Volume discounts are more prevalent in hardgoods and hardware industries, where genuine economies of scale—in shipping costs, for example—can be achieved on behalf of the buyer making large purchases.

You mentioned in your testimony that a descrambler on a private TVRO could be authorized by telephone in a matter of seconds, with the product actually being delivered to the home nearly instantaneously.

This instant delivery is possible because satellite distribution is essentially like broadcasting, in that the signal continuously falls over the cover area and is, in a sense, already "delivered." The telephone authorization of the descrambler simply "unlocks the gate" to let the signal pass unscrambled into the television set.

In a similar fashion, your delivered signal is also instantly available at the "gate" of the receiving dish at the headend of each affiliated cable TV system. Other than billing economies (delivering one bill and receiving one check), what economies of scale are available to you in dealing with large MSOs, in return for which you grant the MSOs much deeper volume discounts?

[Do not include "economies" such as spending time and money visiting small cable operators, since the Hiland Formula plan instituted in 1980 by HBO institutionalized the restrictions of time and efforts HBO regional staffers are allowed to spend with smaller HBO affiliates.]

National Cable Television Cooperative, Inc.,
Overland Park, KS, August 4, 1986.

Mr. Michael J. Fuchs,
Chairman and Chief Executive Officer, Home Box Office, Inc., Avenue of the Americas, New York, NY.

Dear Mr. Fuchs: I am writing to follow up your testimony to the Senate Commerce Committee's subcommittee hearing on July 31, 1986. It is appropriate to restate our willingness and ability to meet reasonable, business-like standards in order for our members to receive HBO's "multiple service operator" (MOS)-level wholesale discounts for the HBO and Cinemax networks.

As you know, the Cooperative was formed by small independent cable system operators in late 1984 to combine the individual purchasing powers of its members. The goal of our not-for-profit group is to achieve economies of scale and commensurate savings in the products, services and programming purchased by the members.

Our meetings with your representatives took place between July and October of 1985 in both Kansas City and New York City.[1] At the conclusion of that series of meetings your representatives refused to do business with us, even though we had met the standards asked of us at the outset.

We began, and ended that series of negotiations with the same entreaty: "Identify for us the standards you hold the major MSOs to, in return for which you grant them deep volume discounts. Let us attempt to meet those same standards, and, if we do so in a reasonable and business-like manner, grant us the same discounts."

During those 1985 meetings, your authorized HBO representatives laid down three major obstacles to doing business with the Cooperative:

(1) We were not owned by the same corporate entity.
(2) We could not provide universal liability for payment.
(3) We could not provide "single-point" billing and payment.

A cooperative, per se, is an enterprise that is owned jointly by those who use its facilities or services. It is, of course, literally impossible for a "cooperative" to be owned by a single entity, as this is a contradiction in terms. It is important to note, however, that any reasonable business standard you now require of a single MSO you can likewise require of a master agreement between your company and members of the Cooperative.

Home Box Office, Inc., has continued to withhold doing business with us because we are not owned by a single entity, yet TCI's own Chief Executive Office, Dr. John

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[1] See Exhibit 'A' for list of participants.

Malone, has admitted that, ". . . the company's consolidated results for 100%-owned systems account for only half of Tele-Communications' interests . . . and that the company's interests of 50% or less in other concerns would constitute another company of equal size." [2]

Why require common ownership of us when you do not require it of others?

Furthermore, it is common knowledge within the cable industry that at least one major MSO has offered—on repeated occasions—to purchase as little as 20% of an operator's company, in return for which he would "wholesale his volume programming discounts to the smaller operator.

The effects of these unfair and discriminatory practices are many. Owners of smaller, independently-owned systems, are forced to charge higher retail prices to their subscribers for the same services. If the independently-owned system is geographically co-located near a system owned by a major MSO, it is difficult for the independent to keep his franchise at renewal time even if the independent's operation is superior in all other ways.

Probably the most important effect of your discriminatory pricing practices is the artificial consolidation of the industry into the hands of a few major MSOs. Since cable systems are market-priced as a multiple of the cash flow they provide, the bidder with the lowest overhead (by virtue of his lower wholesale network programming charges) has an unfair advantage when it comes to buying other cable systems as they come on the market. We have many well-documented examples of how these wholesale price disparties translate into artificially-induced consolidation of the cable industry.[3]

As to your two other obstacles, we remain willing and able to provide both single-point billing and limited liability for payment. (Joint and several liability is certainly an unreasonable requirement, since your scrambling system can be used to simply shut off the service to a non-paying account.)

We are confident we stand on the right side of these issues. All we ask is the opportunity to meet reasonable standards of group performance. In order to avoid litigation, we would be willing to submit the resolution of these issues to third-party arbitration, as might be obtained under the auspices of the American Arbitration Association.

I hope you will see that our interests closely parallel yours on these issues. No company was ever successful over the long run by antagonizing its customers. We represent some of your oldest and most loyal customers, who only wish the opportunity to meet reasonable, businesslike tests in order to achieve the same volume discounts you now offer to major MSOs who offer no genuine economies of scale over what we are able to provide.

We believe your "MSO" discounts range up to 50% when other side-letter financial incentives are lumped in with the actual dollar-discounted wholesale price. We would like to have the opportunity to achieve similar discounts, commensurate to our combined size.

I hope you will continue to take our comments and suggestions in the constrcutive manner they are offered. We are not against you or your company, but that we are for the needs and legitimate interests of many of your oldest affiliates, who constitute the base of independent cable operators who helped make HBO successful in the first place.

The small cable operator shares the same sort of unfair pricing burden as does the rural, private satellite dish owner. We urge you to come to the table in a meaningful way to help us resolve our half of this dilemma.

Sincerely,

MICHAEL L. PANDZIK, *Executive Director.*

[Exhibit A]

Negotiators for the National Cable Television Cooperative, Inc.:

Richard A. Cutler, Esq., Satellite Cable Services, P.O. Drawer U, De Smet, South Dakota 57231, AC 605/336-2880.

Mr. Michael Pandzik, Executive Director, National Cable Television Cooperative, Inc., P.O. Box 25828, Overland Park, Kansas 66225, AC 913/888-1030.

Robert K. Weary, Esq., Cable World Inc., P.O. Box 187, Junction City, Kansas 66441, AC 913/762-2210.

Charles S. Walsh, Esq., Fleischman & Walsh, P.C., 1725 'N' Street, N.W., Washington, D.C. 20036, AC 202/466-6250.

Negotiators for Home Box Office, Inc.:

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[2] *The Wall Street Journal,* Feb. 11, 1986, p. 6.

[3] Letter from Tom Gleason, Jr., July 17, 1986 (Exhibit 'B').

Mr. Joseph Collins, President, Home Box Office, Inc., 1100 Avenue of the Americas, New York, New York 10016.

Mr. William Hooks, Executive Vice President—Affiliate Relations, Home Box Office, Inc., 1100 Avenue of the Americas, New York, New York 10016, AC 212/512-5451.

Tom Woodbury, Esq., Affiliate Relations Counsel, Home Box Office, Inc., 1100 Avenue of the Americas, New York, New York 10016.

[Exhibit B]

GALAXY COMMUNICATIONS SYSTEMS, INC.,
Sikeston, MO, July 17, 1986.

Mr. MIKE PANDZIK,
10541 Flint Street,
Overland Park, KS

DEAR MIKE: Furthering our conversation concerning acquisition of systems by small MSOs where larger MSOs are also involved in the acquistion. In 1985 we attempted to purchase the Ashland City, Tennessee cable system from some local people. We, at the time, owned the systems in Dickson and Dickson County, Tennessee, which is the adjacent county. From an operational standpoint, it fit us very, very well. We offered to purchase the system at approximately $1000 per subscriber because we felt there was a large upside possibility for sales growth and we used our programming costs for cash flow projections.

The owners accepted our offer. Less than two weeks prior to our closing, a much larger MSO stepped in and paid in excess of $1200 per sub for the system.

In later discussions with the particular operator, we found that their programming costs are significantly less than ours and, therefore, they could support the additional $200 per sub by the excess cash flow.

A more current example is Vincennes, Indiana. The system is owned by a local university. We own and operate several small systems in the same geographic area. The asking price is $17,500,000. Using our operational costs we have determined that the system is worth 10 to 12 million. That is based on 11 and 12 times current cash flow.

TCI offered to purchase the system for the asking price immediately upon its' availability on the market and their significantly lower programming costs made it impossible for us to compete to acquire this system.

The point of this is that with our programming costs, we are totally priced out of the acquisition market when faced with competition from a major MSO.

Sincerely,

TOMMY L. GLEASON, Jr.

NATIONAL CABLE TELEVISION COOPERATIVE, INC.
Overland Parks, KS, August 5, 1986.

Hon. LARRY PRESSLER,
U.S. Senator from South Dakota, Senate Russell Office Building, Washington, DC.

DEAR CONGRESSMAN PRESSLER: I would be sorely remiss if I did not take the time this week to thank you for your assistance and support of the National Cable Television Cooperative in last Thursday's (7/31/86) Senate Commerce Committee's subcommittee hearing on satellite scrambling.

There is no greater calling for an elected representative than to come to the aid of a constitutent. On behalf of South Dakota members of the Co-Op in specific, and independent cable operators in general, we thank you.

The original information your staff was provided, that ". . . discounts ranged up to 50% . . ." is, I believe, correct—despite Michael Fuch's protests to the contrary. I worked for HBO from March of 1979 until I left the payroll in October of 1984. During that period I served as Regional Director of one of HBO's major regional offices, serving HBO and Cinemax affiliates in seven states (KS, IA, MO, NE, ND, OK and SD). While I thoroughly enjoyed my service wtih Time Inc., and left under good graces, I was always distressed by the disparity in wholesale prices and treatment between that offered the major MSO and the independent cable operator.

I am sure that HBO will provide the "rate card" information you requested from them during the 7/31/86 hearing. They will probably provide a copy of their current rate card—an example of which I will enclose with this letter.

What this rate card does not show, however, is the "off-card" discounts, marketing and advertising funding and other financial incentives that act in concert to reach the ". . . up to 50% discount . . ." levels. For example, The April 1, 1985 HBO Rate Card (enclosed), lists the highest wholesale volume discount as 20% off for affiliates with 100,000 or more HBO subscribers. Not shown, are "off-card" discounts of,

	Percent
150,000 or more	22½
200,000 or more	25
250,000 or more	30
300- to 500,000 (plus)	34

Large MSOs routinely get free monthly subscriber program guides, special advertising co-op funds for local promotions, special rate to use spare HBO satellite space for system-wide "Sell-a-Thons", and the like. HBO employees routinely travel to large MSO systems to do on-site sales training of system employees. HBO often funds picnics or parties for staffs of large-account MSO systems. For many years, HBO has thrown parties in Hawaii and the Caribbean for the CEOs and Presidents of the largest MSOs—all the while knowing that the independent cable operator was the only one paying "list price."

The heart of our argument is this:

Volume discounts are generally available in business, but they are usually limited to those situations where there are genuine economies of scale and reduced costs of doing business brought to the transaction by the buyer.

Satellite transmission is similar to broadcasting in that it does not matter to the radio or television transmitter or to the satellite transponder whether there is one "listener" or a million—the costs are the same. An argument might be made that economies in wholesale billing—sending one bill to an MSO is cheaper than separate bills to separate small cable systems, but we are willing to assume the "single-point" billing role.

In light of these arguments, and those outlined in the enclosed letter to HBO Chairman Michael Fuchs, I hope you will continue to assist us in seeing that justice is done.

Finally, I hope when HBO presents its wholesale rate cards to you as you asked them to do in the hearings, your staff will be alert and ask for the "side letters" that generally accompany major MSO contracts with HBO and further lower the effective monthly rate charged the major MSOs by HBO.

Thank you again for your past assistance. You can count on us for continued support of you and your efforts in resolving these inequities.

Sincerely,

MICHAEL L. PANDZIK, *Executive Director.*

Enclosure.

HOME BOX OFFICE, INC.,
New York, NY, October 6, 1986.

Hon. LARRY PRESSLER,
U.S. Senate, Russell Senate Office Building Washington, DC.

DEAR SENATOR PRESSLER: I received your recent letter as well as Michael Pandzik's letter to me (which you attached). William Hooks, an HBO senior sales executive who is more familiar than I with our affiliation agreements and who has been dealing with the National Cable Television Cooperative, responded to Mr. Pandzik's letter, and I have attached Mr. Hooks' response which addresses in some detail HBO's position and practices regarding volume discounts and the request for affiliation by the National Cable Television Cooperative. I believe that Mr. Hooks' letter speaks to most of the issues raised in your letter to me an fairly states HBO's position with respect to the Cooperative, but to the extent your letter raises some questions not specifically addressed by Mr. Hooks I will attempt to reply to them here.

First, to further clarify HBOs position with respect to the Cooperative, HBO currently has agreements with most, if not all, of the Cooperative members. The Cooperative has requested that we renegotiate those contracts. The members of the Cooperative are substantial businesses with substantial assets and while I understand their motivation to increase their profitability (whether through a renegotiation of their agreements with HBO or otherwise), the contracts were entered into on a fair and arms-length basis and we see no reason for renegotiation at this time. HBO's pricing policies are in every respect lawful and based on our own best business judgment. If the price of our services is not competitive, the marketplace will dictate appropriate modifications. Moreover, we have indicated to the Cooperative that their concerns if valid, are more appropriately addressed by modifying the rates made available to all of HBO's affiliates modifications to our rates announced in July of this year and discussed in the Hooks letter were designed in substantial measure to address the concerns raised by the Cooperative and HBO's smaller affiliates.

As for the benefits to HBO of dealing with companies who commonly own and manage a number of systems, the statements made in the interrogatories and Mr. Pandzik's letter suggesting that there are no economies of scale in dealing with those companies are misinformed. Indeed if the only cost of delivering the HBO service were the cost of delivering the signal there would be no need for our sales and marketing staff which comprises some 500 employees—a substantial portion of the cost of running our business. The ability to deal with companies with centralized managements responsible for distributing and marketing our services in a variety of systems is a significantly economy. We are unconvinced that comparable economies exist in dealing with a buying collective whose members have different managements with varying performance results and whose interests are diverse and often competing.

With respect to your request for disclosure of certain pricing information relating to specific agreements with our customers, HBO is under a contractual obligation to maintain the confidence of those agreements. Moreover, disclosure of this information would substantially injure HBO in negotiations with its affiliates since our most recent or most favorable agreement would become the de facto starting point for subsequent negotiations with other affiliates. HBO does, as one would expect in a competitive environment, negotiate terms and conditions in its agreements with affiliates on matters other than rates. However, Mr. Pandzik's assertion that HBO offers effective discounts to its affiliates on the HBO service equal to 50% of the nondiscounted rate is simply erroneous conjecture. Likewise his description of the HBO rate card is incorrect.[1]

Although I have made my views on HBO's business philosophy and goals well known in the course of your Committee's hearings, I would like to reassure you that HBO's stated objective since its inception in 1972 has been to reach every television household in America with our programming services. Our business strategies, including pricing, have always been and will continue to be designed with that overriding long-term goal in mind. I trust you will agree with me that HBO should be permitted to conduct its business (like any other) with the freedom to pursue its objectives in a lawful manner consistent with its own best business judgment.

Respectfully yours,

MICHAEL FUCHS,
Chairman and Chief Executive Officer.

HOME BOX OFFICE, INC.,
New York, NY, September 12, 1986.

Mr. MICHAEL L. PANDZIK,
Executive Director, National Cable Television Cooperative, Inc., Overland Park, KS.

DEAR MICHAEL: Michael Fuchs has asked me to respond to your August 4 letter to him regarding the request of the National Cable Television Cooperative that HBO reduce its rates for Cooperative members.

As a general observation, I do not feel that your letter fairly represents HBO's position with respect to this matter or HBO's practices with respect to its volume discounts. I must take particular exception to your statement that following meetings in July and October of 1985 the Cooperative satisfied HBO's expressed concerns with respect to offering the Cooperative a rate reduction. As you know, the Cooperative's members presently have agreements with HBO which specify the rates payable to HBO. Accordingly, from the outset we stated that a change in our policy and a concurrent renegotiation of your members' present agreements would be unjustified from HBO's point of view without some corresponding benefit to HBO and specifically that any restructuring of our per subscriber rates to the Cooperative members would have to be revenue neutral. Our concerns in this regard were never satisfied and remain unallayed.

Extending price discounts to large volume buyers is common in most businesses and is the practice of most programmers and hardware suppliers in the cable television industry. Indeed, I think it is fair to say that the percentage discount offered by many basic programmers to large volume customers is substantially greater than that offered by HBO. (Your belief that the HBO programming service discounts for multiple system operators is as great as 50% is simply mistaken.) Moreover, if as you say smaller operators by virtue of their size are placed at a competitive disadvantage when competing against larger companies for the acquisition of systems, a relatively insubstantial portion of that disadvantage could be attributed to the product price of a single supplier such as HBO. Other and more significant disadvantages faced by smaller operations in cable (and in most other businesses), if they exist, would arise from the scale economies which larger operations enjoy in the purchase of other programming and hardware, the cost of and ability to obtain financing, clustering systems to achieve efficiencies in marketing and lower marginal operating costs in general.

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[1] HBO does offer an HBO service discount of 22½% for affiliates with 150,000-200,000 subscribers and 25% discount for affiliates with 200,000 or more subscribers. Since only a few companies qualify for those discounts they are not included as a part of our published rate card, a copy of which was forwarded to you. With respect to your question regarding the rate for an affiliate with 250,000 HBO subscribers and a monthly retail of $9.70, the HBO wholesale on that retail amount computed in accordance with our standard rate card and would be $4.05.

HBO's volume discounts are the outgrowth of historical incentives provided to operators to encourage distribution of HBO and reflect the economies of dealing with companies that are commonly managed and owned (whether or not those companies are wholly owned or partially owned and managed, as in the case of TCI, which you point to in your letter). We are unpersuaded that those efficiencies exist in the case of a buyer's cooperative whose members have divergent (and potentially conflicting) interests. Moreover, since each of the Cooperative companies are under different managements with varying performance results in marketing our products, it would not be possible to insure consistent performance results among the Cooperative members and each member of the Cooperative would be rewarded equally on a per subscriber basis irrespective of that member's performance. With respect to your point that the need for joint liability of the Cooperative members' obligations has been obviated by our ability to deactivate a member's decoder, deactivation does not, of course, by itself guarantee that an individual member of the Cooperative will be able to satisfy its accrued obligations. Moreover, deactivation would merely deprive HBO subscribers of access to our service through the deactivated cable system.

In our discussions over the past year or so we have explored with you and the Cooperative members various economic rationales and mutual considerations for reducing HBO's rates to the Cooperative affiliates. In the course of those discussions, we have expressed our belief that offering deeper rate discounts for smaller operators, if justified, would best be accomplished by modifying our rate card and making those discounts available to all HBO affiliates rather than by dealing with selected buying collectives. To that end, we announced in July that HBO would offer all of its affiliates (irrespective of size) a $1 monthly wholesale rate on incremental subscribers over the next couple of years. This rate proposal is in fact quite similar to the proposal made by the Cooperative to HBO in March of this year and was specifically designed to address the concerns expressed by the Cooperative and other smaller operators.

Finally, since I am unaware of any meritorious legal claims the Cooperative may have regarding HBO's pricing policies, your suggestion that we submit our differences to arbitration strikes me as inappropriate. Moreover, we have agreements with the Cooperative members which we would naturally expect to be honored. That notwithstanding, we certainly remain open to further explorations of how our mutual interests might best be served.

Very truly yours,

William G. Hooks,
Senior Vice President, Affiliate Operations.

Senator **Pressler**. Next I will call upon Mr. Neil Austrian, president, Showtime/the Movie Channel, Viacom International.

Mr. **Austrian**. Good morning. Since May 1984 I have actually been chairman and chief executive officer, and maybe I was demoted while on vacation, so I apologize.

I would really like to address the issue the committee is considering this morning, which is scrambling. We believe the scrambling of our satellite signal accomplishes two primary goals.

First, it is a necessary and important tool to combat the piracy of our satellite cable programming signals by unauthorized commercial operations that intercept these signals and distribute them for profit to apartment complexes, hotels, motels, bars and other commercial establishments.

Second, by scrambling we have a mechanism in place that allows us to secure payment for our signals to backyard earth station owners.

What we have found since November 1984 when we first announced our intention to scramble is a dramatic increase in the number of commercial establishments, SMATV operations and hotel-motel operations which have entered into legal licensing agreements with us for the distribution of our program.

Additionally, those customers who have traditionally been excessively slow payers have dramatically improved their payment schedule. Without scrambling, there would have been a continued loss of revenue to us.

We estimate that our cost of scrambling will total approximately $9 million, which includes the cost of decoders, uplinking equipment, the development of a back office, computer resources, advertising and other expenses. Currently, through First Data Resources we have set up a customer authorization service center, where over 40 employees respond to customer inquiries and orders 16 hours a day, 7 days a week, specifically to serve TVRO.

Obviously, we would not incur such substantial expense if we were not convinced of the need to scramble our signals and that this was really a business for us. We view the backyard market of individual market earth station owners as an untapped source of revenue.

As such, we have addressed ourselves to the goal of servicing this marketplace. Our actions have shown our desire to efficiently service this market; however, we strongly believe that this marketplace is best served by free and open competition without undue government involvement.

We believe that the provisions in the 1984 Cable Act represent a fair and workable compromise among the interests of all involved parties. It is clear from the legislative history that the intent is to allow the marketplace to work within the framework established by the new law. We do not believe there is any current justification for changing this assumption.

We have been satisfied by the sales generated from our sales and marketing efforts since scrambling on May 27, 1986. In only 8 weeks, we have nearly 25,000 units with 14,000 backyard subscribers, and our buy rate is increasing. Further, we have received and responded to over 100,000 telephone calls from consumers who have requested information on how they could secure decoders and satellite cable programming.

Over 25 percent of our current customers are writing us a check in excess of $200 to buy their programming on an annual basis. We believe that there has been and will continue to be sufficient price competition, both in decoders and in the sale of programming. In response to Showtime's direct retail price, as Michael Fuchs has already mentioned, HBO has already announced a discounted price based on the purchase of annual subscriptions for HBO and Cinemax.

At Showtime, in addition to our previously announced competitive prices, we had already instituted a sales plan of providing a 13th month of service free for each annual prepaid subscription. Several cable operators have already announced price reductions from their originally stated TVRO prices, and other cable operators have announced prices which are competitive with the direct prices established by Showtime/the Movie Channel and Home Box Office.

As more services become scrambled, there will be a greater need for program packages to be provided. We have already announced our intention to be a packager and market our services in competitive price packages with other programming services.

We are currently in discussion with many cable programmers for the right to distribute their services to the TVRO market. We are happy to announce this morning that we have signed agreements with both CNN and ESPN to distribute their product to the backyard market, both inside and outside franchised areas. We stand ready to place in our package any and all scrambled programming services, assuming they grant us reasonable licenses.

The TVRO industry is still in a very early stage of development. We believe that as it grows and develops, it is likely competitive forces will continue to be employed and offer consumers a wide range of options. In addition, it is our hope that as the marketplace matures and the number of decoders manufactured increases, the unit price of each decoder will decline significantly.

These developments would be curtailed if a moratorium on scrambling were imposed. Moreover, such a moratorium would severely hamper the ability of satellite cable programmers and operators to combat the problem of commercial signal piracy detailed above.

Thank you.

[The statement follows:]

STATEMENT OF NEIL R. AUSTRIAN, CHAIRMAN, CHIEF EXECUTIVE OFFICER, SHOWTIME/THE MOVIE CHANNEL INC.

Mr. Chairman and Members of the Committee, I am pleased to appear this morning on behalf of Showtime/The Movie Channel Inc. at the invitation of the Committee to discuss satellite television scrambling. Since May of 1984, I have been Chairman and Chief Executive Officer of Showtime/The Movie Channel. Showtime/The Movie Channel is owned by Viacom International Inc. and operates two of the nation's largest satellite pay television networks, Showtime and The Movie Channel, which transmit entertainment programming to over 8.2 million subscribers in the United States. Showtime/The Movie Channel also operates Viewer's Choice, a national satellite pay-per-view network.

Showtime is the nation's second largest pay-television network. The service's programming is comprised of a line-up of feature films, Broadway plays, comedy, drama, music, original series, family and children's entertainment and foreign and classic films.

The Movie Channel is the nation's only 24-hour, all movie, pay service. The Movie Channel is also the only national service to premiere an entire new slate of film product each week.

Viewer's Choice, our pay-per-view service, offers over 1,200,000 addressable cable subscribers a slate of Hollywood feature films and sporting events which they can select on an individual basis for a per-viewing fee. Viewer's Choice broadcasts by satellite two channels of programs 24-hours a day, seven days a week.

Showtime/The Movie Channel Inc. is a part of the Viacom Networks Group which includes MTV Networks (including MTV and VH-1, music-oriented advertiser-supported cable services, and Nickelodeon, a children's and family-oriented service) and a one-third interest in the Lifetime advertiser-supported cable service. Its parent company, Viacom International Inc., is a diversified communications and entertainment company which also owns cable television systems, television and radio stations, is the world's leading independent distributor of network television programming and is a major producer of network television programming. The consolidated revenues of the businesses Viacom presently owns represented revenues in 1985 of more than $800,000,000.

I would now like to address the issue the Committee is considering today—satellite television scrambling. We believe the scrambling of our satellite signals accomplishes two primary goals. First, it is an important and necessary tool to combat the piracy of our satellite cable programming signals by unauthorized commercial operations that intercept those signals and distribute them for profit to apartment complexes, hotels, motels, bars and other commercial establishments, and to assure us the ability to secure payment from authorized affiliates in a timely manner. The second goal that will be accomplished is that scrambling, by requiring payment for our satellite programming services, will promote their sales to backyard earth station owners.

Showtime/The Movie Channel has been looking into the possibility of scrambling its satellite signals as early as six years ago. We did not make the investment in scrambling earlier because the cost of developing the technology and the unit price of the decoders was prohibitive (as high as $15,000 per decoder unit). In the last few years, however, as the cost of the technology and the decoder boxes has decreased and the unauthorized use of earth stations by commercial operators to intercept our programming signals has increased, the need for (and the viability of) scrambling has increased. The VideoCipher II scrambling process which is being utilized by Showtime/The Movie Channel is also being utilized by every other scrambled, major, satellite-delivered cable programming service and has been designated as the desired technology by all other currently unscrambled, major, satellite-delivered cable programming services that have announced their intention to scramble. This technology will allow us to fulfill both of our goals—the encryption of our satellite programming signals and the marketability of such signals to each individual backyard HTVRO consumer.

Showtime/The Movie Channel offers subscription pay services and pay-per-view services. The critical element in our business is that this programming is worth paying for. By scrambling our program services we have protected them against piracy by unauthorized commercial operations.

What we have found since November, 1984 when we first announced our intention to scramble, is a dramatic increase in the number of commercial establishments, SMATV operations and hotel-motel operations which have entered into agreements with Showtime/The Movie Channel for the distribution of our programming (and in most cases have made restitution for unauthorized use). Additionally, those customers who have traditionally been excessively slow payers have dramatically improved their payment schedules. We are certain that these improvements directly result from the scrambling of our program services. Without scrambling, there would have been a continued loss of revenues to Showtime/The Movie Channel from unauthorized use.

Without scrambling, the only way Showtime/The Movie Channel can protect its services is through legal action. All or our activities in this area have been directed towards commercial operators that we believed had received, retransmitted and charged subscribers for our satellite cable programming to hotels, motels or apartment complexes without authorization and for their own profit. Our anti-satellite piracy efforts have never been directed against individuals with their own backyard dishes who receive satellite cable programming for private viewing.

Since the passage of the 1984 Cable Act, Showtime/The Movie Channel has established detailed procedures for processing and verifying reports of unauthorized commercial interception and distribution of its satellite programming services. We have sent out hundreds of letters advising commercial operators to cease and desist in their unauthorized reception and retransmission of our services. In certain cases in which a satisfactory response was not received, they had been investigated for litigation and we have commenced litigation in several instances based on investigations that were conducted. These actions have been brought under the Cable Communications Policy Act of 1984 and, in addition, where appropriate, based upon copyright infringement, trademark infringement and, unfair competition under common law or state statutes. Those cases that have been resolved either by settlement or adjudication have been resolved to the satisfaction of Showtime/The Movie Channel. However, although we would hope that lawsuits of this type would have a deterrent effect on commercial piracy, litigation is a costly, cumbersome way to protect the integrity of our cable programming services. For every unauthorized commercial operator we discover, we are certain that there are many others who have gone undetected. As a result, the only practical solution to this problem is scrambling.

We estimate that the costs of scrambling the Showtime and the Movie Channel satellite services will total approximately $9 million. This includes the costs of affiliate decoders, uplink equipment, the development of a back office, computer resources, advertising, and other expenses. Additionally, through First Data Resources we have set up a customer authorization and service center where over 40 employees respond to customer inquiries and orders 16 hours-a-day seven days each week. Obviously, we would not incur such substantial expenses if we were not convinced of the need to scramble our signals to protect their integrity and help secure them from unauthorized commercial operations, and if we did not believe that our services could be effectively marketed to private backyard earth station owners.

While scrambling has made a significant contribution to the effort to curb satellite signal piracy by unauthorized commercial operations, it will not be a panacea. Unfortunately, we anticipate that there may be a continuing commercial piracy problem even after scrambling is implemented. It is possible, for example, that certain people will purchase decoder boxes ostensibly to use in their own backyard for private viewing, but will in fact put the decoder box in a hotel, bar, apartment complex or other commercial property. In developing our scrambling plans, therefore, we have taken care to try to develop a system which will enable us to keep track of the location and the use of all decoders that are authorized to receive our services. We will also endeavor to notify and educate all persons who subscribe to our programming services as to their legal obligations. We believe that a person who uses a consumer decoder box to intercept scrambled satellite signals for an unauthorized commercial purpose is subject to both civil and criminal penalties under the 1984 Cable Act applicable to willful violations for purposes of direct or indirect commercial advantage or private financial gain.

The individual addressability provided by the VideoCipher II has enabled us to market our services to backyard earth station owners who wish to subscribe. This goal was one of those expressly contemplated when the Cable Communications of 1984 was enacted. The Report of the Conference Committee on the Cable Act stated "(t)he technology associated with encrypting, encoding, scrambling or otherwise altering a signal so that a special device is required to receive an intelligible signal, enables parties with the rights to the programming to control the distribution of their product in a manner that provides an incentive for them to make their product available to the satellite home viewer." We believe that scrambling has made an important contribution to the effect of marketing of cable programming services such as ours to the backyard consumer, and this helps to justify the substantial cost of scrambling our signals.

Showtime/The Movie Channel views the backyards market of individual earth station owners as an untapped source of revenue. As such, we have addressed ourselves to the goal of serving this marketplace. Our actions have shown our desire to efficiently serve backyard earth stations owners. However, we strongly believe that this marketplace would be best served by free and open competition without undue government involvement. This was the philosophical premise of the 1984 Cable Act which provided an exemption from liability under the Communications Act for an individual who received unscrambled satellite cable programming for private use in his own dwelling unit by means of TVRO equipment owned or operated by him where no marketing system had been estabished.

We believe that the provisions of the 1984 Cable Act represent a fair and workable compromise among the interests of all the involved parties. It is clear from the legislative history that the intent was to allow the marketplace to work within the framework established by the new law. We do not believe that there is any justification for changing this assumption.

For example, the Report of the Conference Committee stated that the legislation, as amended, was intended "to provide satellite cable program suppliers in the future with two clear alternatives for the protection of their satellite transmissions. They may either scramble their signal, or leave their signal unscrambled and establish a marketing system that results in individuals being authorized to recieve the satellite cable programming through a compensation scheme. If unauthorized interception of satellite cable programming occurs after either of these two approaches have been followed, then a satellite cable programmer will have the ability to pursue the greatly strengthened penalties and remedies new section 705 provides."

The Conference Committee Report also made it clear that one of the underlying premises of the exemption from liability afforded private backyard earth station owners with respect to unscrambled satellite cable programming was that "the marketplace is fully capable of reaching, without any government intervention, a solution to the problem of unauthorized interception and receipt of encrypted satellite cable programming. The technology associated with encrypting, encoding, scrambling or otherwise altering a signal so that a special device is required to receive an intelligible signal, enables parties with the rights to the programming to control the distribution of their product in a manner that provides an incentive for them to make their product available to the satellite home viewer. Accordingly, the narrow exception to subsection (a) applies only to the more difficult problem of receipt of interception of unencrypted or unaltered satellite cable programming."

We are fully confident that the marketplace can work in a fair and effective manner within the framework of the 1984 Cable Act as its sponsors intended. We do not see any need for any additional legislation that would prevent or hamper the ability of the markeplace to function within the parameters that were carefully worked out by all interested parties in 1984 and for these reasons would oppose any such legislation.

As stated above, Showtime/The Movie Channel views the backyard dish owner as a potential customer. Without scrambling, this customer would have no reason to pay us for our programming. At this juncture, I would like to briefly outline some of the actions we have taken in connection with scrambling our signals and marketing them to the backyard TVRO market.

In November of 1984, Showtime/The Movie Channel signed an agreement with M/A-Com for the purchase of the equipment to scramble and secure Showtime and The Movie Channel's satellite signals using M/A-Com's VideoCipher equipment. As part of this agreement, M/A-Com assured Showtime/The Movie Channel that consumer boxes in sufficient numbers would be available for the backyard TVRO owner. Additionally, M/A-Com was required by Showtime/The Movie Channel to cross-license their technology with other manufacturers to ensure decoder availability and competitive pricing.

In January 1986, having distributed decoders to our affiliates, we announced that test scrambling would commence on January 27, 1986 and that full-time scrambling was anticipated to commence in May of 1986. In addition, we announced that we planned to use the services of M/A-Com's DBS Control Center, insuring that consumers would be able to receive all satellite signals using the M/A-Com VideoCipher II technology with a single decoder. This announcement was critical in that there was significant concern that the use of multiple technologies would cause confusion in the marketplace and require the consumer to expand unnecessary dollars to acquire duplicative decoding equipment. We also announced at this time that M/A-Com had assured us that more than sufficient quantities of home decoders would be in the pipeline to hardware dealers prior to May.

On January 27, 1986 we began test scrambling of the East Coast satellite feeds of Showtime and The Movie Channel. During test scrambling, which began for short periods of time, there was no test scrambling from the hours of 4:00 P.M. to 2:00 A.M. on weekdays and at no time on weekends. These prime viewing hours were left unscrambled due to our sensitivity to the needs of the backyard consumers who owned private earth stations.

During February 1986 we launched a major marketing campaign in all the satellite program listing guides highlighting the availability of Showtime and The Movie Channel to the backyard HTVRO market.

On March 10, 1986 we unveiled a comprehensive marketing plan aimed at enabling home satellite dish owners to subscribe to our services on a monthly basis at competitive rates. Under this program we provide our services to earth station owners directly and also through our cable affiliates within their franchised areas. In April our customer authorization and service center and an 800 toll-free telephone number were instituted a full six weeks before scrambling to provide complete information, ordering, customer service and billing for all direct home satellite subscribers. This system was interfaced with M/A-Com's DBS Authorization Center which would afford the greatest programming choice to owners of VideoCipher II decoders.

In our announcement, we established national retail rates for direct sales of $10.95 for either Showtime and The Movie Channel and $16.95 for both services when ordered together. Cable operators participating in our sales program establish their own retail rates for the services they wish to offer in their franchised areas. Showtime also announced that it had no intention of selling home satellite equipment but wished to support the sales and leasing of such equipment by equipment distributors and cable affiliates.

On May 27, 1986 Showtime/The Movie Channel joined SPACE, a group of satellite TV publishing companies, Turner Broadcasting and other pay services in sponsoring Programming Access Day aboard the aircraft carrier Intrepid in New York Harbor. From our point of view, Program Access Day was meant to indicate our willingness to work in conjunction with the home satellite television industry to bolster the sale of TVRO equipment and satellite programming. Mr. Chuck Hewitt, the Executive Vice President of SPACE, summed up the position of those present representing the satellite industry by stating that SPACE had no opposition to scrambling and that "scrambling legitimizes our industry . . . (i)t's in our best interest that scrambling works."

On June 6, 1986 Showtime/The Movie Channel announced that at significant cost we were providing a promotional and informational feed on Satcom 3R, transponder 12 for use by satellite equipment retailers in their showrooms. This channel includes promotional highlights of Showtime and The Movie Channel programming and 2 twenty-minute segments which provide general information on satellite scrambling and how to connect VideoCipher II units to satellite systems. The purpose of this channel is to increase consumer awareness of the availability of premium programming and to restore consumer confidence in the HTVRO business. Additionally, we announced that, subject to technical and legal requirements, we wished to provide to the equipment retailers an "on/off" channel that would allow them to receive our programming on an intermittent basis to permit the demonstration of both the VideoCipher II scrambling technology and our programming to prospective customers.

On June 19, 1986 Showtime/The Movie Channel announced a cash incentive marketing awareness bonus payable to participating satellite retailers who sell VideoCipher II decoders to consumers who also subscribe to Showtime and/or The Movie Channel. Additionally, 11 major satellite equipment distributors have entered into arrangements with Showtime/The Movie Channel to participate in our program and are providing additional rebates to the equipment retailer. To increase local market awareness of Showtime and The Movie Channel in retail equipment showrooms, satellite retailers participating in the incentive program receive, free of charge, marketing materials, including posters, point of purchase displays, information/ordering brochures and special premium offer coupons for consumers.

Showtime/The Movie Channel has been satisfied by the sales generated from its sales and marketing efforts. In only eight weeks we have nearly 25,000 pay units of Showtime and The Movie Channel with 14,000 backyard subscribers and our buy rate is increasing. Further, we have received and responded to over 100,000 calls from consumers who have requested information on how they could secure decoders and satellite cable programming.

We believe that there has been and will continue to be sufficient price competition both in the manufacture and sale of the VideoCipher II decoders and in cable television programming without the involvement of the FCC or Congress. In response to the Showtime direct retail price, HBO has already announced a discount based on the purchase of annual subscriptions to the HBO and Cinemax program services. We at Showtime, in addition to our previously announced competitive prices, had already instituted a sales plan of providing an additional month of service for free for each annual pre-paid subscription of Showtime and/or The Movie Channel. Several cable operators have already announced price reductions from their originally stated HTVRO prices and other cable operators have announced prices which are competitive with the direct prices established by Showtime/The Movie Channel and Home Box Office.

As more and more services become scrambled, there will be a greater need for program packages to be provided to the HTVRO backyard owner. Showtime/The Movie Channel has recently announced its intention to market its services in competitively-priced packages with other programming services. We are currently in discussions with many cable programmers for the right to distribute their services to the HTVRO market and agreements with two programmers for such sales of their services by Showtime/The Movie Channel are imminent. We anticipate that we will be entering into further agreements with additional satellite programming companies to enable us to provide even greater programming access to the HTVRO consumer. We intend to offer an attractive package of program services to the HTVRO market priced at or below cable rates for comparable packages. This will enable Showtime/The Movie Channel to: satisfy backyard consumers who wish to subscribe to services in addition to our program offerings, help us minimize significant start-up and operating costs to facilitate consumer purchases, and maximize our revenue from this market.

The satellite TVRO industry is still in a very early stage of development. We believe that as it grows and develops, it is likely that competitve forces will come into play that will offer consumers a wide range of options. In addition, it is our hope that as the marketplace matures and the number of decoders manufactured increases, the unit price of each decoder will decline significantly. These developments would be curtailed if a moratorium on scrambling were imposed. Moreover, such a moratorium would severely hamper the ability of satellite cable progammers and operators to combat the problem of commercial signal piracy detailed above.

Legislation has been introduced in both Houses that would give the FCC the authority to establish prices, terms and conditions for backyard TVRO owners' access to scrambled satellite programming. The provisions of such bills are similar to provisions included in legislation previously introduced in the Congress that, as part of the compromise resulting in the passage of the Cable Communications Policy Act, were ultimately not included in the final bill enacted in 1984.

We continue to believe, as we indicated two years ago, that there is no need to legislate a compulsory licensing procedure for scrambled programming administered by the FCC, and that the private marketplace will work well if given a chance to function. In addition, there would be a hornet's nest of problems in seeking to implement any compulsory licensing procedure to be administered by the Federal government.

In addition, the FCC has deregulated pay cable, STV and MDS rates, and Congress deregulated basic cable rates beginning in 1987 in the Cable Communications Policy Act of 1984. FCC regulations of satellite cable programming, a competitive technology, would fly in the face of the ongoing government effort to deregulate the communications marketplace.

In light of these strong concerns, we believe it is important for the marketplace to be given a chance to work in the post-scrambling environment, as was contemplated when the 1984 cable legislation was enacted.

In conclusion, the backyard earth station market is still in a very early stage of development. We do not yet know exactly what sort of a market it will turn out to be, but we at Showtime/The Movie Channel hope it will be a major market. Last year a major concern on Capitol Hill was that there be a compatible technology for the descrambling of satellite cable programming services, so that an individual owning a backyard earth station would have to purchase or lease only one decoder in order to receive a wide range of services. At this point, all major cable programmers have independently announced that they will use a single scrambling technology. We believe this is one indication that the private marketplace will develop in a fair and efficient manner as the industry matures, so as to serve the best interests of consumers while at the same time protecting the integrity of the programmers' signals. We would like to work with you to accomplish these ends.

Senator PRESSLER. Next, I shall call on Mr. Phillip A. Jones, who is the chairman of CBS Television Network Affiliates Advisory Board, also the vice president-general manager of KCTV in Fairway, KS.

Mr. JONES. Thank you. KCTV is in Kansas City, MO. We're licensed to broadcast out of Kansas City. I greatly appreciate the opportunity to appear before the committee today on a matter of vital importance to the 200-plus CBS affiliates around the country.

Network affiliates form the local component of the affiliate network partnership that pioneered television broadcasting in the United States and remains the foundation of the entire commercial television system. Affiliate signals reach an enormous percentage of the television households in this country with a combination of local and national programming more than any other mass media. You might be surprised to know that the CBS affiliates reach a considerably larger percentage of U.S. homes than local telephone service.

As local distributors of the network programs, affiliates were for years linked to our national programmer, the network, by long-distance telephone lines and microwave relays. Several years ago, the networks began moving toward a distribution system utilizing satellites, and most television stations installed Earth stations for program supply and news gathering purposes.

Unfortunately, the security of the network's private feed to us was diminished when smaller versions of these Earth stations began appearing in many backyards, and some people began viewing the network feed from the satellite rather than watching their local stations.

Interception severs the electronic and contractual link between local affiliates and the network, the fundamental relationship in this business since its inception 50 years ago, and undermines the concept of the combined local/national service.

Unlike HBO, Showtime, and other cable networks which provide complete program channels designed to receive and be received by individual subscribers for pay either through cable or direct to home, CBS does not provide programming intended for direct reception in the home.

Rather, CBS affiliates integrate the network feed with many hours per day of local news, public affairs, and entertainment programming. Some of this programming is purchased by local stations from syndicators, and some of it is produced at our stations, but all of it is designed to serve the local needs of our audience. Each affiliate's contribution is vital if we are to have a locally-based television system that serves the public interest.

The practical problem for us that is raised by home Earth station interception of network feeds is that those who watch the feed directly from the satellite are usually viewers in the local affiliate service area. To the extent that the local viewers get the network portion of the affiliate network service from the satellite, they are not viewing the local advertising, emergency messages, political broadcasts and other programming that affiliates insert into and adjacent to network programming.

In addition, local television stations devote enormous amounts of free time to the messages of hundreds of local charitable church and civic organizations, from the Lions Club and Girl Scouts to messages addressing social problems such as drug abuse, drunk driving, and hunger relief. These local organizations stand to be the losers when Earth station owners view network programming from the satellite.

Recently, CBS began scrambling its network feed to certain affiliates in order to protect the legitimate property rights and regain the security of the past. CBS affiliates encourage the network to scramble its feed to us. We believe the network has the right to protect the private nature of its national program service to us. We should be able to rely on our being an exclusive recipient of that feed in our local market, and advertisers should have the same assurance.

We recognize that while we reach almost 87 million television households in this country, there is unfortunately a relatively small number of homes that, because of terrain or distance, cannot receive the CBS affiliate over the air. We, as well as you, understand the special concern for those homes and are taking steps to minimize the number that cannot receive us.

As many of you know, we have formed a task force of CBS affiliates from all parts of the country to explore ways in which affiliate signals can be extended into the relatively few television households presently beyond our reach. We are seeking ways to enhance existing signal coverage areas and expand the use of translators and repeater stations to extend the combined affiliate network service into new areas and fill voids in existing areas.

We do not, however, believe that the solution is to turn the CBS Television Network into something it was not designed to be, a direct-to-home service. In 1981, when CBS and its affiliates began consideration of a scrambling system that would satisfy stringent technical demands, no one ever considered making the feed available to homes. There were a few Earth stations around at the time, and CBS has never been in the direct-to-home business. CBS affiliates do not believe Congress should force CBS into becoming one of a hundred or so national program services and at the same time sacrifice the local services only we can furnish.

Finally, let me mention two words that have become popular these days, marketplace and competition. As the manager of a television station in a local market, my market is my local service area, and my signal is my sole product. When parts of that market are effectively lost because dish owners ignore my signal and intercept my contractual program source, that is of great concern to me.

In part, because of the policies of Congress and the FCC, I face more expensive competition in my limited geographic marketplace than ever before. There are more over-the-air stations competing for audience, and while cable may help me reach additional homes, cable also delivers a host of other services from afar that compete with me.

To succeed in this crowded marketplace, my product must be distinctive, which it has been only because my station offers local programming attuned to local needs and interests along with an attractive network service.

Mr. Chairman, CBS affiliates have every incentive to extend their service to unserved areas. It may not be possible to achieve a universal television service to a 100-percent level, but within a reasonable time we believe that CBS affiliates, working together with the network, can reduce the number of homes lacking an acceptable affiliate signal. That way, the admission price of the best combined local and national television service in the world will continue to be only the cost of a television set.

Also, Mr. Chairman, the chairman of the ABC Affiliate Association, Mickey Hooten, who is also the general manager of television for Hearst Broadcasting, has asked me to submit a brief statement to be entered into the record which supports the CBS affiliate board's position.

[The statement follows:]

Statement of Mickey L. Hooten, Chairman, ABC Television Affiliates Association

My name is Mickey L. Hooten, and I am General Manager of Television for The Hearst Corporation. I presently serve as Chairman of the ABC Television Affiliates Association, which consists of some 212 television stations throughout the nation that are affiliated with the ABC Television Network.

ABC Television Affiliates oppose legislation that would prohibit broadcast networks from encoding satellite transmissions intended solely for reception by local affiliated stations. A network's satellite "feed" to each affiliate is a private point-to-point communication, which contains not only network programming, but also various instructions and messages intended only for use by the local station. It is only after the local station has inserted its local news, local weather, local public service and political announcements that the network program becomes a finished product for broadcast to the local community. This addition of local news, public service and political material to national network programming embodies the very essence of "localism." Legislation that would facilitate the by-pass of this kind of local program material in favor of the raw network satellite feed would be inconsistent with Congressional efforts over the last fifty years encouraging the provision of local television service. A prohibition against the scrambling of network feeds would, of course, facilitate by-pass of local and network programming by all dish owners—not just those who live in isolated areas.

Local affiliates rely on the revenues they receive from the sale of local commercial announcements that appear within and adjacent to network programs. Advertising dollars from these commercial announcements go toward the support of local news, local public affairs and local public interest programming.

Television broadcasters have been and are continuing to explore ways to extend television coverage to the one or two percent of the nation's homes that do not presently receive a terrestrial broadcast signal. For example, in testimony before a House Subcommittee in February, Max Sklower, Vice President and General Manager of ABC-TV affiliate KOAT-TV in Albuquerque, described the steps taken by his station to serve isolated and sparsely populated areas.

KOAT-TV has expended considerable funds to construct its own translator and booster stations and has provided financial and technical assistance to a number of communities for their own translators. As a result, KOAT-TV is now carried on 82 translators, 14 of which it owns. The station's signal may now be received in sparsely populated communities in a four-state area.

KOAT-TV's experience in New Mexico demonstrates the extent to which television service may be provided to rural America without by-passing local stations. Unfortunately, however, the efforts of local stations in this regard have been impaired by the existing backlog of translator and low power applications at the FCC. If the processing period for translator applications could be shortened, it would greatly facilitate the efforts of local television stations to provide service to isolated areas. We welcome any assistance this Committee might provide in resolving this problem.

We, frankly, are at a loss to understand how the satellite dish industry can seriously contend that the public is somehow entitled to intercept and receive what is clearly a private communication. When network feeds were carried by telephone lines, no one ever suggested that the public should be permitted to "wiretap" the phone lines and eavesdrop on them. A network transmission to an affiliate does not, of course, lose its character as a private communication simply by the deployment of a new technology. If legislation should be enacted to mandate access by backyard dish owners to network feeds, it would also appear, by analogy, that a wide range of private business satellite communications would be subject to the same kind of public pirating.

In conclusion, we respectfully urge Congress to reject the current effort by the backyard dish industry to fashion a radical new public property right in private electronic communications. We share the interest of Congress in promoting the widest possible dissemination of local television service. We believe, however, that objective can best be achieved by the expanded use of translator stations, rather than by legislation that would undermine the Congressionally mandated system of local television service.

Senator **Pressler**. Without objection, it shall be included.

Next I will call on Mr. Harold C. Crump, chairman, NBC Affiliates Legislative Committee, H&C Communications, Inc., Houston, TX.

Mr. **Crump**. Mr. Chairman and members of the committee, thank you for this opportunity to appear before the Senate Commerce Committee today.

I would like to summarize my submitted statement.

My name is Harold Crump. Today I testify as chairman of the legislative committee of the NBC Television Affiliates, an association of more than 200 local television stations affiliated with the NBC Television Network. I am also president of the Broadcast Group of H&C Communications, Inc. H&C owns and operates television stations in six markets. Our stations represent affiliation with all three networks.

Historically, network affiliates received the network portion of their programming through telephone lines. Advances in technology have now made satellite communications a more efficient distribution system. The network customarily delivers programming and other information to its affiliates for prior review in advance of broadcast. Since affiliates are responsible under the Communications Act for all material which they broadcast, regardless of the source, prescreening is essential to an affiliate's informed programming decisions

In the past, no one would have suggested a network feed transmitted over telephone lines or by microwave radio should be intercepted by third parties. Congress has long recognized private transmissions or privileged communications, and that interception, whether by wiretap or other means, is unlawful.

Network feeds to affiliates are no less private today because they are transmitted by satellite. The interception of network affiliate communications does more, however, than violate lawful rights of privacy. It also defeats the inherent public interest value of an affiliate service to its community.

To better illustrate this situation I will use only two H&C Communications stations as examples. In Nashville, TN, WTVF produces a yearly telethon for the Muscular Dystrophy Association and a yearly telethon to raise needed funds for Vanderbilt Childrens Hospital. WTVF has been nationally recognized for its leadership in producing the Channel 5 Health Fair, a program of great help to the entire viewing area of Kentucky and Tennessee, and particularly low-income families.

Last year WTVF produced another nationally recognized special program entitled "Aging: A Family Affair."

In Houston, KPRC-TV was one of the original supporters of both the fundraising telethons for the United Negro College Fund as well as the Muscular Dystrophy Association. Day-long food drive programs have provided tons of needed food and thousands of dollars given to needy families in Houston.

At both of these stations and in the over 200 NBC affiliated stations, local charities, local hospitals, local health agencies, and local educational institutions are given millions of dollars worth of free advertising to tell the local public their stories and their needs.

This work needs to continue. This work needs to be protected from the unlawful interception of network signals that do not contain local public service, local newscasts, and local paid commercials. Although estimates are difficult to confirm, a significant number of backyard dish users are within the service area of one or more network affiliated stations. Consequently, whenever those viewers intercept the network feed, they are not exposed to the affiliate's local news, public service, and local commercial and political candidate announcements.

These backyard dish users already have full access to local as well as national television programming. It is common knowledge backyard dishes within the station service areas are often used to intercept network feeds of sporting events not intended for that market. There is no gentle way to describe such an interception. It is nothing less than an unlawful taking of a private property right and a willful interference with an exclusive contract between a network and its affiliate, and perhaps interferes with the network's contractual arrangements with the sporting interest.

Every public service program is dependent upon some form of revenue support. The revenues we rely on to provide our local programming come from the sale of advertising. Advertising revenues in turn are dependent on viewership. When backyard dish owners within our service area intercept the network feed, local affiliates will lose viewership and revenues, and their capacity to improve or perhaps even maintain the quality of local programming may be jeopardized.

A network affiliated station can compete effectively against other national and local media services. It should not, however, be expected to be its own competitor by permitting the national portion of its service to be expropriated for public use. If the NBC Television Network cannot scramble its transmissions, the NBC television affiliates face the unconscionable prospect of competing against their own network for the attention of viewers in their own local service areas.

If, as we believe, the real issue today is the unavailability of local signals in white areas, our mutual objective should be to extend the availability of local broadcast signals beyond their present reach. The NBC affiliates and, I am confident, all broadcasters are eager to extend their signals to unserved areas by the use of translators. Translators which rebroadcast the signals of local stations have been an effective means of bringing service to viewers in like areas. A resolution of the problem of local program availability is best accomplished through an expansion of existing local service rather than a restriction on the private communications between a network and its affiliates.

The NBC Television Affiliates Association welcomes the opportunity to work with the Congress to expand local service to unserved areas.

Thank you, Mr. Chairman, for this opportunity to appear before the Senate Commerce Committee, and I am ready to answer questions when needed.

[The statement follows:]

STATEMENT OF HAROLD C. CRUMP, PRESIDENT, H & C COMMUNICATIONS, INC., BROADCAST GROUP ON BEHALF OF THE NBC TELEVISION AFFILIATES ASSOCIATION, INC.

Mr. Chairman and Members of the Committee, thank you for this opportunity to appear before the Senate Commerce Committee. My name is Harold Crump, and I am here today to testify as Chairman of the Legislative Committee of the NBC Television Affiliates, an associatioin of more than 200 local television stations affiliated with the NBC Television Network. I am also President of the Broadcast Group of H & C Communications, Inc. H & C owns and operates television stations in 6 markets as of today. Our stations represent affiliation with all 3 networks and range in size from the nation's 10th ranked TV market, Houston, to 82nd ranked Tucson, Arizona, as well as Nashville, Tennessee, Daytona Beach, Florida and Des Moines, Iowa and as of today San Antonio, Texas.

The NBC Television Affiliates are proud of the public service they provide to millions of Americans. Collectively, we serve more than 98% of the nation's households, in communities both large and small. Moreover, while there are other national media services and local media services, we bring our viewers a unique combination of national and local broadcast service. The strength and popularity of the network/affiliate relationship are as much a consequence of our combination as our individuality; indeed I believe both NBC and its affiliates would agree that we offer our viewers a better broadcast service in combination than we could ever provide separately. As a result, the public interest value of our service would be significantly diminished if only the national or only the local portions of this combination would be received by viewers.

Historically, affiliates received the network portion of their programming through telephone lines and radio microwave relay transmission facilities. Advances in technology have now made satellite communications a more efficient distribution system. The network customarily delivers programming and other information to its affiliates in advance of broadcast for prior review. Since affiliates are responsible under the Communications Act for all material which they broadcast, regardless of its source, pre-screening is essential to an affiliate's informed programming decisions. Such network "feeds," regardless of the form of transmission, also contain intranetwork information such as news actualities, sports clips, internal communications, etc. In short, network feeds are private communications.

No one would have suggested several years ago that network feeds transmitted over telephone lines or by microwave radio could be intercepted by third parties. Congress has long recognized that private transmissions are privileged communications, and that interception of such messages (whether by wiretap or other means) is unlawful. Network feeds to affiliates are no less private today because they are transmitted by satellite than they were several years ago when they were transmitted by telephone lines. The "scrambling" of satellite transmissions is simply an available method of protecting the private nature of network/affiliate communications.

In fact, scrambling is an entirely lawful method of preserving the privacy of satellite communications. Section 705 of the Communicatioins Act prohibits the unauthorized interception of satellite-network feeds. Network feeds of programming or program material carried by satellite and intended for internal use or for broadcast stations were specifically included among the privileged communications protected by Section 705.[1] Indeed, Section 705 is intended to protect the privacy of network feeds even if they are not scrambled. Thus, Congress has already recognized that network satellite transmissions to their affiliates are private communications entitled to the same protection as transmission over telephone lines or microwave radio facilities.

The interception of network/affiliate communications does more, however, than violate lawful rights of privacy; it also defeats the inherent public interest value of an affiliate's service to its community. Congress has long recognized, and the Communications Act required, that an affiliate's service as a local outlet of expression is the essential reason that broadcasting is different from other forms of communication. It does not diminish the importance of network programming to observe that a network feed is incomplete without the affiliate's inclusion of its local news, weather and public affairs programs; its emergency and public service announcements; and its local commercial and political advertising messages.

To better illustrate this situation, I will use only two of the H & C Communications stations as examples. In Nashville, Tennessee, WTVF has an outstanding record of public service including a yearly telethon for the Muscular Dystrophy Association to help fund needed services for victims as well as research to find a cure for this horrible disease, and a yearly telethon to raise needed funds for Vanderbilt Children's Hospital. WTVF has been nationally recognized for its leadership in producing the Channel 5 Health Fair, a program of great help to the entire viewing area and particularly low income families. A problem we all share is that of aging parents and relatives. Last year, WTVF produced another nationally recognized special program entitled "Aging: A Family Affair. In Houston, KPRC-TV was one of the original supporters of the fund raising telethon for the United Negro College Fund as well as the Muscular Dystrophy Association Telethon. Day-long Food drive programs have provided tons of needed food and thousands of dollars, given to needy families in Houston. At both of these stations and in the over 200 NBC affiliated stations, local charities, local hospitals, local educational institutions and local health agencies are given millions of dollars worth of free advertising to tell the local public their stories and their needs. This work needs to continue. This work needs to be protected from the unlawful interception of network signals that do not contain local public service, local newscasts and local paid commercials. Our unique station/network relationship provides this financial underpinning for all of our local efforts.

Interception of the network feed gives the backyard dish viewer substantially less than the service contemplated by Congress and intended in the Communications Act: news and discussion of local events; the advertising and public service announcements of local merchants, religious and charitable organizations; political advertising and equal time responses by state and local candidates and government officials, are all missing from a network feed. Although estimates are difficult to confirm, a significant number of backyard dish users are within the service area of one or more network affiliated stations. Consequently, whenever those viewers in the service area of affiliated stations intercept a network feed, they invariably are not exposed to the affiliate's local news, public service and local commercial and political candidate announcements, all of which constitute a significant part of the public interest value of affiliates' programming. Under the circumstances, backyard dish users within the service areas of affiliated stations already have full access to local as well as national television programming, and there is no public interest need that requires their interception of a network feed. It is common knowledge, nevertheless, that backyard dishes are often used to intercept network feeds to obtain sporting events not intended to be viewed in that market. There is no gentle way to describe such an interception; it is nothing less than an unlawful taking of a private property right and a willfull interference with an exclusive contract between a network and its affiliate, and perhaps interferes with a network's contractual arrangements with sporting interests.

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[1] Statement of Chairman Packwood, 130 Cong. Rec. S14283, daily ed. Oct. 11, 1984.

It must be noted that every public service is dependent on some form of revenue support. Network affiliated stations are not in the business of charging their viewers a fee for broadcast service. Indeed, free over-the-air broadcasting may be the last real bargain for consumers of media information and entertainment. The revenues we rely on to provide our local programming come from the sale of advertising. Advertising revenues, in turn, are dependent on viewership. To the extent that backyard dish owners within our service area intercept the network feed, local affiliates will lose viewership and revenues, and their capacity to improve (or perhaps even maintain) the quality of local programming may be jeopardized. This is more than a matter of parochial economic concern. As I illustrated in just two examples earlier, local stations provide an essential communications voice for thousands of community organizations, charitable institutions, state and local candidates for public office, and local merchants. Since an intercepted network feed contains none of the affiliate's local programming, earth station owners effectively silence the voices of local organizations and individuals whenever they view network programs by satellite.

It has been the objective of Congress, from the beginning of over-the-air broadcasting, that the nation is served best by local stations responding to local concerns and providing an outlet for local expression. That does not suggest that the public should be denied, or that local stations should be shielded from, the competition of national media services. It is fundamentally unfair, however, and inconsistent with the public interest benefits anticipated from the programming provided by local stations, to prevent the networks from controlling the privacy of their transmissions to affiliated stations. A network affiliated station can compete effectively against other national and local media services; it should not, however, be expected to be its own competitor by permitting the national portion of its service to be expropriated for public use. A network affiliation contemplates exclusivity. If the NBC Television Network cannot scramble its transmissions, the NBC Television Affiliates face the unconscionable prospect of competing against their own network for the attention of viewers in their local service areas.

Mr. Chairman, after full consideration of the issue, we are confident that the Congress and the public will appreciate the reasonableness of protecting the private nature of network/affiliate transmissions, and that they will understand the importance of insuring the availability of local affiliate programming to all viewers in a station's service area. Local service to the public is a shared objective for all of us. Unfortunately, the reach of our service throughout the nation is not yet within our collective grasp; some households cannot receive local television service either directly or from a cable system.

If, as we believe, the real issue is the unavailability of local signals in selected areas across the country, that problem is not resolved by prohibiting the scrambling of network transmissions. Rather, or mutual objective should be to extend the availability of local broadcast signals beyond their present reach. The NBC Affiliates (and I am confident all broadcasters) are eager to extend the reach of their signals to unserved areas through the use of translators. Particularly where mountainous terrain or the remoteness of small communities prevents the reception of local signals, translators (which rebroadcast the signals of local stations) have been an effective means of bringing service to viewers in such areas. More than 4,600 translators presently bring local service to such areas; 600 additional translators have been approved for service and are under construction. More than 650 applications for new translators await action by the FCC. Regrettably, the FCC's authorization of new translators has been slowed to a crawl under a log-jam of thousands of low power TV applications. In fact, since the FCC imposed a "freeze" several years ago, it has been impossible to file applications for new or improved translator facilities. The NBC Affiliates urge Congress to redirect existing FCC resources or to authorize additional personnel to speed up the grant of pending applications. Perhaps priorities can be established that favor expedited processing of translator applications proposing to bring service to areas presently without over-the-air television service. Whatever the available means, a resolution of the problem of local program unavailability is best accomplished through an expansion of existing service rather than a restriction on the private communications between a network and its affiliates. The NBC Television Affiliates Association welcomes the opportunity to work with the Congress to expand local service to unserved areas.

Thank you Mr. Chairman for the opportunity to appear before the Senate Commerce Committee. I would be pleased to answer any questions you may have.

Senator **Pressler**. Finally, we will hear from Mr. Keith Lamonica, FM America, Salt Lake City, UT.

Mr. **Lamonica**. Good afternoon, and thank you, Mr. Chairman, and members of the committee, and committee staff, my name is Keith Lamonica. I am president and chief executive officer of FM America, the Nation's first satellite only radio station. I appear today on behalf of FM America's more than 41,000 members and hundreds of thousands of listeners who are TVRO owners and dealers.

Over the past dozen years there has been a revolution in this country. That revolution has occurred as a result of the explosive growth of video programming services. Twelve years ago video programming was largely dominated by the three major networks and Public Broadcast Service. Today, a significant number of viewers are able to select from a video menu that includes sports, public affairs, business, religion, and several other forms of programming.

In 1984, the Congress recognized this revolution, referring to the wide variety of programs that had developed over the past 10 years. The Energy and Commerce Committee of the House of Representatives said access to telecommunications networks is becoming increasingly important to full participation in the political, economic, social, and cultural life of the Nation.

The committee went on to note that access by the public to as wide a diversity of electronic information sources and services is critical to assuring that the underlying goals of the first amendment are realized.

Of course, the committee was speaking of such access as it contemplated the Cable Communications Policy Act of 1984. While the committee spoke specifically of access to cable systems, we should bear in mind that the cable itself has no intrinsic value. Rather, it is a medium of delivery for the new video programming.

In its consideration of the act, the committee strongly emphasized the desirability of alternative delivery systems, specifically including direct broadcast satellite systems. The committee concluded the public interest is served by this competition and it should continue.

To date, the debate regarding scrambling of satellite signals has not focused on the issues of access of programming and competition among delivery media that are of concern to the Congress. Rather, it has been clouded by the misperception that TVRO owners are seeking free access to programming services, and more recently it has been dominated by the deplorable incident involving Captain Midnight.

I feel it is unfortunate that the debate has taken this turn, because the real wishes of the TVRO owners are completely consonant with the expressed policies of Congress. TVRO owners do not seek to receive free video programming. Now, while they have been able to enjoy such programming at no charge, it must be remembered that prior to the event of scrambling, no means existed, no means existed for TVRO owners to be billed for those services, nor was there a means to allow them to pay for those services if they wished to.

TVRO owners recognize that in order to provide the diverse and high quality programming currently available, programmers must be compensated for these services, and they are more than willing to pay for these services. Now, despite their willingness to pay for programming services, there remains a deep shadow over the future of the TVRO industry. Present TVRO system owners and prospective first time buyers must assess for themselves a variety of complex issues for which reliable information is not readily available.

For example, consumers must make judgments regarding the future plans of programmers called scrambling, and which they have the ability to purchase. The confusion of the TVRO marketplace is underscored by reports of a study recently completed by HBO. The study indicated that most TVRO owners and first-time purchasers believed it was necessary to buy a different decoder for each premium service they wished to receive at a cost of approximately $400 per decoder. This perception could have a chilling effect on the TVRO market.

The present TVRO industry and the long anticipated direct broadcast satellite industry are becoming increasingly intertwined. Many people believe that the current TVRO industry will form the nucleus of the future DBS industry. Therefore any chilling of the current market is likely to have a spillover effect that will slow the introduction of the promising new DBS technology.

In the study I mentioned previously, HBO estimates that the TVRO marketplace will be back to its previous level by 1988, and I feel that this is an optimistic estimate. However if the statement is true, it means that scrambling of signals has caused the TVRO and DBS industries to experience at least a 2-year setback. Now, fortunately, there are actions that can be taken to get these industries back on track.

First of all, FMA feels that Congress or the Federal Communications Commission must adopt a standard means of encryption and the coding of satellite signals. Now, while many programmers use the M/A-Com VideoCipher II, present owners and purchasers have no assurance this technology will remain.

If I may have a moment to finish, Mr. Chairman, I am just about there.

In many cases installed TVRO systems must be modified by hand to permit interface with the VideoCipher II. Standardization will also permit manufacturers to develop reliable interface devices for retrofitting these items.

In closing, I would like to emphasize that TVRO owners are not seeking special interest legislation. Rather, they are requesting that they be permitted reasonable access to video programs through a delivery system that is an alternative to the cable.

Thank you, gentlemen.

[The statement follows:]

STATEMENT OF KEITH LAMONICA, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FM AMERICA

Mr. Chairman, members of the Committee and Committee staff, I am Keith Lamonica, President and Chief Executive Officer of FM America ("FMA"). FMA is the nation's first satellite-only radio station. FMA has been in service since June, 1985. It is supported both through commercial advertising and through memberships of and donations from its listeners. As a result of the consummation of its merger with the Star Talk Network, FMA is now a publicly-traded company.

FMA represents a coalition of more than 41,000 members throughout the United States and Canada. These members are consumers of and dealers in television receive-only ("TVRO") services and equipment. As part of its programming, FMA broadcasts a nightly listener call-in show for member discussions of TVRO regulatory issues.

I. DEVELOPMENT OF THE VIDEO PROGRAMMING AND TVRO INDUSTRIES

Entertainment programming via satellite began in 1975 with the first live transmission of a baseball game between the Texas Rangers and the Milwaukee Brewers. In the same year, Home Box Office ("HBO") began to offer "premium" programming, including first-run movies and special events, through satellite distribution to cable systems. The first "super station" to broadcast via satellite was Turner Broadcasting's WTBS in 1976. Since that time, a host of video services, including religious, business, sports, public affairs, music, children's, health-oriented, cultural and arts, movie, and a host of other entertainment services have been offered via satellite. Collectively, these services constitute a revolution in the variety and availability of video programming. The pervasiveness of this revolution is evidenced by the fact that acronyms like HBO, ESPN, etc. have entered the lexicon of the average American such that they appear in popular publications without definition.

The rapid growth of cable television distribution systems made this video revolution possible. Cable systems, originally conceived as a means of improving poor broadcast signal reception in rural areas, helped to spread the video revolution by including these newly available services in their offerings. Many "premium" services, such as HBO, were offered on an incremental cost basis, while others were bundled and included in "basic" cable service offerings.

While the proliferation of cable television systems provided the impetus for the development of the video programming services, development of programming alternatives spurred the growth of cable. The economics of the cable television industry slowed the introduction of cable in certain demographic situations; specifically, in rural areas and densely populated urban areas. At present, at least 25 million U.S. homes are not served by cable.

The desirability of these new video programming options caused the birth of a new industry to serve those homes not reached by cable. The first working home satellite television system was built in 1976. Development of such systems permitted residents in areas not served by cable to access the new video programming. Since that time, the TVRO industry has grown dramatically. At present, there are approximately 1.7 million TVRO systems in use in the United States.

II. THE IMPORTANCE OF ACCESS TO THE NEW VIDEO PROGRAMMING SERVICES AND SATELLITE COMMUNICATIONS HAS BEEN RECOGNIZED BY THE CONGRESS AND THE FCC

Until recent years, the primary medium of access to non-broadcast programming services was television cable. In considering the Cable Communications Policy Act of 1984, PL 98-549, 98 Stat. 2779, Congress addressed many of the issues facing the TVRO industry. The House Energy and Commerce Committee noted:

"As we enter the "information age," *access to telecommunications networks has become increasingly important to full participation in the political, economic, social, and cultural life of the nation.* The First Amendment's guarantee of a free flow of diverse ideas will be reduced to an empty promise if access to information is not available to all of our citizens.

"Consumer access is integral to the diversity provisions of HR4103. *There is simply no point to requiring diverse information and services if a large segment of the population can be denied access to that information. . . . H. Rep. 98–934 (98th Cong., 2d Sess.) at 36, as reprinted in 5 U.S. Code & Cong. and Adm. News 4655, 4673 (italic added).*

The Energy and Commerce Committee was speaking of the rights of apartment dwellers to enjoy access to cable television service. However, the fact that the Committee was willing to adopt legislation specifying a term in the relationship between landlords and tenants (which was heretofore viewed as a private, local matter) underscores the importance placed on access to video services. The importance of access was further emphasized by the Committee: "The Committee believes that *access by the public to as wide a diversity of electronic information sources and services is critical to assuring that the underlying goals of the First Amendment are realized.* In order for individual citizens to be benefitted by access to the large variety of cable services and programming services that cable systems will be increasingly providing, those citizens must first be permitted to have the ability to bring cable service into their homes." *Id.* at 79, 4716 (italic added). While the Committee spoke specifically of cable access, the cable itself has no intrinsic value. The value of access to cable lies in its use as a means of facilitating the delivery of programming services. Thus, it was access to the video programming, and not the distribution medium, that gave rise to the Committee's concerns. TVRO equipment can deliver the same video services in areas in which cable service is not available.

In adopting the Cable Communications Policy Act of 1984, the Congress recognized the importance of cable television systems in delivering video programming to consumers. In its deliberations on the Act, the Congress also restated the national policy favoring development of direct broadcast satellites ("DBS") and affirmed the need for competition among delivery media. The Committee, noting that the cable television industry was subject to extensive regulation, stated: At the same time, in adopting this legislation, the Committee is concerned that federal law not provide the cable industry with an unfair competitive advantage in the delivery of video programming. *National communications policy has promoted the growth and development of alternative delivery systems* for these services, such as DBS, SMATV, and subscription television. *The public interest is served by this competition, and it should continue. Id.* at 22-23, 4659-4660 (italic added).

Over the last 20 years, the Federal Communications Commission ("FCC" or "Commission") has made a great effort to foster the development of domestic satellite communications technology. In order to realize the full potential of domestic satellite communications, the FCC established an "open skies" policy for domestic satellite communications whereby both the space and ground segments of the technology are intended to expand in a marketplace unencumbered by regulatory restraints. The most important outgrowth of this policy has been the launching of over 20 satellites, resulting in a current availability of over 350 transponders.

Undoubtedly, one of the more successful commercial uses of domestic satellites has been the use of C- and Ku-band satellites for the delivery of entertainment programming to cable television systems and broadcast television stations. The Commission has also taken other steps to promote the satellite industry.

Consistent with its active promotion of the industry, in a recent decision the FCC took the extraordinary step of preempting local zoning ordinances in order to facilitate the use of TVRO equipment. The Commission took this step because it felt that such ordinances "may be interfering with Federal objectives in providing for the growth of nationwide satellite-delivered communication services." 55 Fed. Reg. 13,986 (1985)

As a basis for its authority to preempt local zoning ordinances, the Commission cited a 1984 amendment to the Communications Act, 47 U.S.C. § 705. The provision, which established the qualified rights of individuals to receive unscrambled satellite signals, was viewed by the FCC as an expression that "[C]ongress wished to ensure that Americans who did not have access to cable programming would have access to such programming." *Id.* at 13,988. Thus, the Commission has shown a willingness to assume an active role in removing barriers to the development of a satellite communications system.

Both the Congress and the FCC have recognized substantial public interest benefits from the implementation of direct broadcast satellite technology as an alternative means for delivery of video programming, and the values of the programming itself. FMA firmly believes that a robust and healthy TVRO industry is the surest means of facilitating the emergence of DBS techonology.

III. THE CURRENT TVRO INDUSTRY WILL EVOLVE INTO A DIRECT BROADCAST SATELLITE INDUSTRY

The rapid development of the TVRO industry is a tribute to the American free enterprise system. New video programming services provided a strong impetus for ownership of TVRO equipment, and American manufacturers seized the market opportunity to manufacture and distribute such equipment. The growth of the TVRO industry can only be described as explosive. However, as deployment of TVRO systems increased, the new technology threatened to undermine the economics of the video programming and cable television industries.

Providers of video programming services are generally compensated by cable companies on a "per drop" basis, receiving a portion of the revenues by the cable company from the individual subscriber. Since TVRO owners access video programming directly, no means existed for programmers to capture revenues from such programming. As the TVRO industry continued to grow, the problem became increasingly acute for both programmers and cable companies. After several years of discussion, in January, 1986, HBO became the first video programmer to encrypt its signal. A number of video programming services, such as Showtime and Cable News Network, have followed HBO.

Unfortunately, the issue of satellite television signal encryption is muddled, and a great deal of confusion exist as to the position of present TVRO system owners. TVRO owners have, at various times during the debate on encryption, been characterized as engaged in theft of service, and as "video pirates." In reality, prior to the advent of encryption, no means existed for programmers to charge for the services received by TVRO owners. In fact, no practical means existed for TVRO owners to pay for programming on a voluntary basis, if they so desired.

TVRO owners recognize the need for video programmers and cable companies to charge for their services. While most TVRO owners disagree with the manner in which encryption of signals was accomplished, few would argue they have a right to receive such signals without charge.

At present, there are at least three major systems for encryption and decoding of satellite signals. Each of these systems employs a different technology, and differs in availabilitry, usefulness and price. The most common system, the M/A-COM Video Cipher II, costs approximately $400 per unit. See, Communications Daily, March 7, 1986 at 2. Consumers are reluctant to commit to such an investment given the current uncertainty regarding future developments surrounding encryption.

As a result of the present confusion concerning encryption, many potential first-time purchasers have deferred purchase of TVRO equipment. In addition, current owners of TVRO equipment are extremely reluctant to invest in decoder technology for fear that this technology will be quickly rendered obsolete by changes in the marketplace. Six months after it began encryption of its signals, HBO reports that approximately one percent of the TVRO audience has subscribed to its service. Ku Band World, July/August 1986 at 12.

The advent of encryption, and the related publicity, has caused a marked decrease in sales of TVRO systems. Sales of TVRO systems fell from approximately 60,000 systems in October, 1985 to approximately 10,000 in January, 1986. Communications Daily, February 4, 1986 at 1. FMA feels that this dramatic drop is sales in a direct result of the confusion regarding the encryption issue. This confusion has spread because of advertising on the part of cable companies and programmers, a lack of understanding of the issues on the part of the media, an a lack of understanding of the encryption technology.

The confusion of the TVRO marketplace exists not only among potential first-time buyers, but among existing equipment owners as well. TVRO system owners have been confronted with a confusing array of information as to the legality of encryption, the future plans for encryption among programmers, pricing of services, and differences among encryption technologies. This confusion is perhaps best illustrated by the case of an FMA member who attempted to purchase programming from a major programmer that had recenlty scrambled it signal The member was told by the programmer's sales respresentative: "I'd wait before I put any money into a decoding device.

TVRO owners object to the differential pricing between those receiving programming over cable systems and those receiving it over TVRO equipment. The average cost of a TVRO system is estimated to be $2,400, while the cost of an average cable drop is estimated to be $900. The cable company pays for its delivery system, and depreciates it under the tax laws. By contrast, the TVRO owners must pay for their delivery system up front, they are charged the same or a higher price for programming service.

The need of video service providers to be compensated for their services, and for cable operators to limit the "free rider" problem within their service areas is a legitimate issue that must be addressed in any proposed solution to the present problem. However, those needs must be balanced with the needs and concerns of TVRO system owners and those who might buy such systems in the future.

The rapid development of TVRO technology represents a major development in communications technology. While current C-band systems require relatively large dishes that can preclude some applications, the deployment of new Ku-band satellites and receiver systems will permit even more rapid growth in satellite distribution systems. The present TVRO industry and the long anticipated DBS industry are becoming increasingly intertwined. FMA feels that the current TVRO industry will form the nucleus of a DBS system.

Unfortunately, the present state of ambiguity and confusion in the TVRO industry will have a spill-over effect into the DBS industry. Future DBS consumers are likely to remember the "problems" that present TVRO owners have experienced when they consider an investment in DBS systems. Widespread development of this feeling among consumers will likely have the unfortunate effect of retarding the development of a promising new technology.

IV. THE CONGRESS AND THE FCC MUST ACT TO PREVENT HARM TO THE FUTURE OF DBS TECHNOLOGY

As a first step toward resolution of the current problems in the TVRO marketplace, FMA urges the Federal Communications Commission and/or the Congress to adopt a standard for the technology for encryption of and for decoding of satellite signals. A settled standard technology for encryption and decoding would allow purchasers and current owners to clearly assess the real costs of TVRO ownership. It would also assure present owners that their investment in this evolutionary technology will not be rendered useless in the future. In addition, first-time consumers will be assured that they are purchasing viable equipment that will have a substantial useful service life. In both cases, standardization would represent a positive development that will stem the deterioration of the satellite distribution medium and further the expressed policy of the Congress to promote the development of direct broadcast satellite systems.

Equally important is the fact that adoption of an encryption standard will encourage manufacturers of TVRO equipment to manufacture in volume the equipment necessary to ensure the long-term viability of the TVRO market. A substantial portion of the current installed base of TVRO equipment requires an interface device in order to use the Video Cipher II. Firms are reluctant to build such devices absent a clear showing that there will be a consistent market. Therefore, each individual TVRO system must be modified using the costly and often unreliable process of hand crafting to permit linking of the Video Cipher II with existing equipment.

Once a single technology is established as the standard for decoding, manufacturers will be able to economically develop reliable interface devices for the retrofit of decoders and TVRO systems. This development will permit existing system owners to fully utilize and enjoy their investment.

FMA believes that a means must be developed for marketing of programming at a reasonable price directly to TVRO owners. Any such marketing system should allow system owners to select programming packages with premium service options similar to those currently marketed by cable companies. FMA feels that the present a-la-carte system is cost prohibitive for many TVRO owners.

There has been much debate regarding the culpability of programmers, TVRO equipment manufacturers, dealers, cable companies and consumers in causing the current widespread uncertainty in the market. Therefore, FMA believes that such a national marketing system would best be left to a third party with an economic incentive for promoting its development.

The issue of pricing for programming services received over TVRO systems is one on which few parties would agree. The differences in levels of investment in delivery systems, and the incidence of these costs complicate the issue. However, FMA feels that, as a general proportion, the subscription costs for video programming received by TVRO owners should be no more than the wholesale cost of such programming to cable companies—absent a clear showing that such increased cost is related to the cost of providing the service.

The current debate regarding encryption has led to heated exchanges between and among programmers, cable companies, and other TVRO interests. Each side has accused the other of fostering confusion and spreading misinformation. The only certainty arising from the debate is the certainty that the TVRO marketplace has been substantially chilled, and that the long-term effect of that chilling is likely to be a substantial setback in the development of a direct broadcast satellite system.

FMA believes that it is not productive to attempt to assign blame or to continue such debate. Instead, FMA believes that it is time to put aside the charges and accusations in order to permit the development of this significant and promising new technology to resume. Therefore, FMA encourages both the Congress and the FCC to act swiftly to prevent further erosion of this new technology.

Thank you for affording me the opportunity to appear today to express the views of FMA's members.

Senator PRESSLER. Thank you very much.

I think we have heard all the witnesses at this point. We will operate under the 5-minute rule, and I have enough for at least a couple of rounds. So I will start, if you can turn the lights on here, to keep me in line.

Now, I want to get into something, and Mr. Fuchs, you may be able to help me. I have been told that the large multiple system operators will grant volume discounts of up to 50 percent of the rate smaller operators have to pay. Some of the smaller operators have formed a National Cable Television Cooperative in an attempt to receive similar volume discounts for the same number of subscribers, but I am told that HBO has refused to negotiate with them.

Is that true, and if so, why?

Mr. FUCHS. Well, I think what you are referring to is what we call the volume discount. When a customer delivers a volume of consumers to us, there is a discounting mechanism which is quite common in business.

Senator PRESSLER. Is that 50 percent of the rate or up to 50 percent? How much is it?

Mr. FUCHS. It varies from customer to customer. It is probably as much as a third in some cases.

Senator PRESSLER. Is it up to 50 percent in some cases?

Mr. FUCHS. No; I think that is not the case.

Senator PRESSLER. Just be as forthcoming as you can so we do not have so many followup questions.

Mr. FUCHS. With the situation you are referring to, very often these discounts are granted based on performance. Will that company be able to increase its penetration or provide us with more customers by having a co-op out there which is really just a loose forum for a number of companies?

Our feeling is, there is no accountability. If that co-op is not able to perform along the lines of the contract that they promise for us, we have to go back to eleven different companies. There is no one that is really in charge of that company. With a single MSO owner, we deal strictly with that owner, and so we are able to get a level of performance and accountability from our customer that is not the case in what is really almost a gerrymandered cooperative to obtain a discount.

Senator PRESSLER. But is there some kind of an objective criteria you use or can you basically deal with whomever you wish and on whatever basis you wish to?

Mr. FUCHS. I am sorry, I do not understand, Senator.

Senator PRESSLER. Is there any objective criteria or any standard you use or can you basically deal or not deal with anybody you wish to?

Mr. FUCHS. I do not understand.

Senator PRESSLER. Well, let me try it from another angle. Let me tell you where I am coming from. Last Saturday I played golf in a tournament in Lead, SD, which is in western South Dakota. We have some people in our State who, because of the mountains, do not get a broadcast signal, who do not have cable, and whose only source of television is a dish, for example; and I do not know who is going to protect these people or who is going to give them an opportunity to receive a signal.

There are some small cable operators. That is another thing. And they formed a National Cable Cooperative. But if you will not negotiate with them, what options do they have? What power do they have?

Mr. FUCHS. Is your question how does this dish owner get served?

Senator PRESSLER. No; perhaps I am confusing it. Let me ask it as I read it. Some of the smaller operators have formed a National Cable Television Cooperative in an attempt to receive similar volume discounts with the same number of subscribers. I am told HBO has refused to negotiate with them. Is that true, and if so, why?

Mr. FUCHS. Well, we must spend 90 percent of our conversation with our affiliates arguing about rates. We are not depriving these affiliates of HBO. They can have HBO.

Senator PRESSLER. No, answer my question. Are you willing to negotiate with the National Cable Cooperative?

Mr. FUCHS. We have had many conversations——

Senator PRESSLER. Are you willing to negotiate with the National Cable Cooperative?

Mr. FUCHS. We have negotiated with them. I do not know the specifics that you are talking about.

Senator PRESSLER. Well, describe that. Be very forthcoming here. Describe the results of the negotiations to us.

Mr. FUCHS. The conversations have basically been on rates, are they entitled to a volume discount by grouping smaller cable companies together that have no ownership. There is no linking ownership. We feel that is an artificial device to obtain a volume discount, which is a very customary discounting business for someone who provides a lot of customers.

Technically, if your large customers who provide hundreds of thousands of customers, if every other small customer took out a letterhead and said, I am now in a large group, and my customers in California are linked to customers in Maine and New York, we now want a discount, that would not be very——

Senator PRESSLER. How do you define a large enough group?

Mr. FUCHS. Equity ownership of that company, so that we call the CEO of that company and say, you are not selling enough HBO, or you have not met your performance standards.

Senator PRESSLER. All right, lay out the criteria then. Who is substantial enough? What is the criterion? I think it is just people who play ball with you.

Mr. FUCHS. No; that is not true, Senator. It is strictly volume. It is strictly size. It is regulated by the size.

Senator PRESSLER. What is the size?

Mr. FUCHS. There is a schedule. There is a discount that is regulated by the number.

Senator PRESSLER. The schedule, can we get a copy of the schedule?

Mr. FUCHS. Sure.

Senator PRESSLER. And what is the size? I am sorry, I am out of time, but I would like an answer.

Mr. FUCHS. It goes from level to level, if you have 200,000 customers, 300,000 customers.

Senator PRESSLER. What is it at 200,000 customers?

Mr. FUCHS. I do not know the rate. We can provide that for you.

Senator PRESSLER. Do you have someone in the room who knows the rate? I want to know the breakoff point in the rates.

Mr. FUCHS. I do not know if there is anyone here that has that information

Senator PRESSLER. You do not know? As president of your company, you do not know that?

Mr. FUCHS. I do not know the exact numbers in which we get exact discounts.

Senator PRESSLER. But you are here testifying. Can you give one example? I just want one example of where the rate breakoff occurs, at what level.

Mr. FUCHS. I would imagine that the level is up in the six figures. Anyone that has over——

Senator PRESSLER. Do not imagine. Tell me. You are president of the company. My word, you do not know? I am sure you are in negotiations every day. You cannot honestly sit there and tell me you do not know.

Mr. FUCHS. Well, unfortunately, I do not know the exact number of subscribers that qualifies you for the exact discount.

Senator PRESSLER. Can you give me any example? Can you give me any example?

Mr. FUCHS. I would imagine that if you have in excess of half a million subscribers, you would qualify for the largest discount, which is probably something like a third off of your rate card.

Senator PRESSLER. If you have a least half a million subscribers, you get a third off.

Mr. FUCHS. I am not trying to be exact with that number. I do not know that.

Senator PRESSLER. Do you apply that across the board to all your customers?

Mr. FUCHS. We apply that to systems that are owned and controlled by one company.

Senator PRESSLER. How do you qualify for a 5 percent or a 10 percent discount?

Mr. FUCHS. Again, it is the number of subscribers.

Senator PRESSLER. What is that number?

Mr. FUCHS. Senator, I do not have those numbers with me.

Senator PRESSLER. Who do you have with you here today? Do you have any backup people? I want that information in the record. Who is here with you?

Mr. FUCHS. If you want HBO people to stand in the audience——

Senator PRESSLER. Yes; have them stand up. I want to see who they are. Let us see if any of them know. This is just incredible. Do any of you know of the rates and the schedules? Step forward to the mikes and tell us, because I just hate to waste time in a hearing.

Mr. REDPATH. Senator, I am John Redpath, vice president and general counsel of Home Box Office. I do not know those numbers.

Senator **Pressler**. Can we get those numbers?

Mr. **Redpath**. Yes; we can. We cannot get them to you today.

Senator **Pressler**. None of you know that, but yet you are here testifying saying we have schedules and rates. The president and top people in the company do not know what it is? That is incredible.

Mr. **Fuchs**. Senator, we are here obviously to answer any questions you have. We came prepared to discuss the TVRO business and the idea of scrambling, and this is a little bit afield from that. If there is a hearing that refers to our dealing with our affiliates we will be quite prepared for that.

Senator **Pressler**. But I would like those numbers for the record, and you will provide them. Is that correct?

Mr. **Fuchs**. Certainly.

[The following information was subsequently received for the record:]

Home Box Office, Inc.,
New York, NY, August 7, 1986.

Hon. Larry Pressler,
U.S. Senate, Russell Senate Office Building, Washington, DC.

Dear Senator Pressler: In response to your request, I have enclosed a copy of the current HBO rate card. Although it is generally self-explanatory, I do want to point out that the supplementary service charges for each HBO subscriber are the amounts charged by the cable operator for the delivery of HBO on an individual basis to that subscriber. The cable operator pays HBO the HBO Service Charges called for by the rate card. Any discounts or credits reduce the amount of HBO Service Charges due HBO.

Very truly yours,

John S. Redpath, Jr.

Enclosure.

HBO Service Charges and Applicable Volume and Performance Discounts Effective April 1, 1985:

Monthly HBO Service Charges

Supplementary Service Charges for Each HBO Subscriber:	$7.00 or less	$7.01 to 8.00	$8.01 to 9.00	$9.01 to 12.00	$12.01 to 13.00	More than $13.00
HBO Service Charges Effective April 1, 1985	$4.70	$4.70 plus 40% of charges over $7.00	$5.10 plus 20% of charges over $8.00	$5.30 plus 15% of charges over $9.00	$5.75 plus 20% of charges over $12.00	$5.95 plus 40% of charges over $13.00

Volume Discount Schedule and Application

Affiliates qualify for a reduction in their applicable HBO Service Charges in the event they serve the following number of HBO Subscribers:

Supplementary Service Charges:		$7.00	$8.00	$9.00	$10.00	$11.00	$12.00	$13.00
Volume Discount Schedule:		**HBO Service Charges With Volume Discount Application:**						
Number of HBO Subscribers:	HBO Service Charge Volume Discount:							
10,000 to 24,999	2%	$4.61	$5.00	$5.19	$5.34	$5.49	$5.64	$5.83
25,000 to 39,999	3.5%	4.54	4.92	5.11	5.26	5.40	5.55	5.74
40,000 to 74,999	5%	4.47	4.85	5.04	5.18	5.32	5.46	5.65
75,000 to 99,999	15%	4.00	4.34	4.51	4.63	4.76	4.89	5.06
100,000 or more	20%	3.76	4.08	4.24	4.36	4.48	4.60	4.76

Performance Credit Schedule

Affiliates not receiving the HBO Service Charge reductions on the Volume Discount Schedule may elect to receive Performance Credits for each system that qualifies as determined by the following schedule:

HBO Subscribers as Percentage of Affiliate's Average Basic Cable Subscribers in Each System:	**HBO Service Charges Before Applicable Credit:** Less than $5.20	$5.20 or More
40%—59%	—	2%
60%—79%	2%	4%
80% or more	3%	6%

Performance Credit Application:

Supplementary Service Charges:	$7.00	$8.00	$9.00	$10.00	$11.00	$12.00	$13.00
HBO Subscribers as Percentage of Affiliate's Average Basic Cable Subscribers in Each System:	**HBO Service Charges With Performance Credit:**						
40%—59%	$4.70	$5.10	$5.19	$5.34	$5.49	$5.64	$5.83
60%—79%	4.61	5.00	5.09	5.23	5.38	5.52	5.71
80% or more	4.56	4.95	4.98	5.12	5.26	5.41	5.59

Performance Credit General Terms: **A.** Affiliates receiving a Volume Discount are not eligible for a Performance Credit, and vice versa. **B.** A Performance Credit is only applicable on an individual system basis.

Senator PRESSLER. Senator Gore.

Senator GORE. Thank you, Mr. Chairman. I would like to offer a word of special welcome to one of the witnesses on the panel, Harold Crump, because he is a very long-time special friend, and it is just a great pleasure to see you, Harold, and I want to say for the record that WTVF in Nashville, which Harold used to be general manager of, has indeed provided outstanding public service to the area, and in fact the parent company, I think, really stands out with its commitment to the public interest, and that is not intended to sound just like fluff.

I really believe that very sincerely, and I also think the problem you have described in your testimony is different in several respects from the principal problem that we are focusing on here, and if I have time, I would like to come back and discuss that, because I think the solution to that will be very different in focusing on the white areas, and I think that translators have a big role to play.

I would also like to say that Bob Bergland is a former colleague, long-time friend, and I am greatly appreciative of the leadership offered by NRECA in this area. I wish you well in the initiative that you have undertaken. I know there are some impediments to making it reality. I want to work with you toward that end. And I hope that the programmers will agree to deal with you, and I would like to come back to that a little bit later as well.

But I would like to focus my questions in the time that we have on the two witnesses from the premium programming industry here, Mr. Michael Fuchs and Mr. Neil Austrian, chief executives of Home Box Office and Showtime respectively.

Mr. Fuchs, first of all—well, let me ask you both, just for the record, you are both premium programmers. Your companies are wholly owned by multisystem cable operators. Is that correct?

Mr. FUCHS. Well, Time, Inc., owns HBO. It also happens to be in the cable business, yes.

Senator GORE. It is one of the largest multisystem cable operators in the country, correct?

Mr. FUCHS. Yes; it is. Its cable subsidiary is.

Mr. AUSTRIAN. Viacom, I believe, is in the top 10 or 11.

Senator GORE. So both of you are premium programmers, but you are also part and parcel of a corporate, an integrated corporate structure that operates lots of cable systems, and I just think it is important to clarify that for the record. Now, Mr. Fuchs, I spoke earlier with Mr. Mooney about your $5 a month arrangement which I describe as a kickback. He wasn't sure whether that was fair or not. I would like you to explain to me why you think it is fair.

Mr. FUCHS. Well, quite honestly, Senator, I do not appreciate your characterization of a kickback. This is not the New York City construction industry. I think it is a common business practice. The beverage industry has such an arrangement. The insurance industry has such an arrangement. I have not done a survey of all the businesses.

Senator GORE. I want to know why it is fair, Mr. Fuchs.

Mr. **Fuchs**. It is fair because the cable industry, and sometimes between businesses using the word "fair" is not always the dynamic that enters——

Senator **Gore**. It is hard to use the word "fair" sometimes, but let us try to use it today.

Mr. **Fuchs**. The cable industry controls the supermarket in a sense, and I am one of the products that they sell.

Senator **Gore**. They control the supermarket. The cable industry controls the supermarket. Now, the supermarket meaning all movies? What is the supermarket?

Mr. **Fuchs**. Maybe we should define our marketplace. You have referred to monopoly control and a certain level of coercion. The marketplace, when you say there is no competition in our business, and I am sorry Mr. Valenti is not here, the marketplace is so broad it contains the networks. I compete with the networks. I compete with the television, with all television stations. I compete with the motion picture theaters. I compete with the VCR, which has taken a tremendous bite out of our business.

In the cable franchise the supermarket that contains the cable brands, the exhibitor, if you will, or the distributor happens to be the cable company. Now, in order for me to be prominently featured on the shelves of that supermarket, I sometimes have to pay marketing subsidies, advertising subsidies. Not so uncommon.

Senator **Gore**. What are the shelves?

Mr. **Fuchs**. That is a common terminology in our business for shelf space, the ability to be featured to a consumer.

Senator **Gore**. Where?

Mr. **Fuchs**. Where?

Senator Gore. Yes; how are you featured to a consumer?

Mr. **Fuchs**. When a consumer calls up the cable company and says I am interested in getting cable television, the cable company has the ability to say why do you not buy Showtime, why do you not buy the Disney channel, why do you not buy HBO, why do you not buy the Movie Channel, why do you not just buy basic cable, and this other tier?

Senator **Gore**. OK, but within the terms of the example that I am asking you about, let us say that I am a dishowner in a cable franchise area. I do not have cable. It is quite common. I do not have cable, and I call up HBO, and you say, you do not have cable? We will sell you our signal direct to you as a dishowner, but we are going to force you to pay an extra $5 a month to the cable company that you are not hooked up to. Why is that fair?

Mr. **Fuchs**. That is not the case, Senator. First of all, we do not control retail pricing from our cable customers. We get a wholesale price from our cable affiliates.

Senator **Gore**. I am talking about the price that you are charging the dishowner.

Mr. **Fuchs**. The dishowner is paying, and as I said in the opening statement our average retail price for HBO in the marketplace is about $10 nationwide, somewhere in the $10.70 range. With an annual subscription, the backyard earth station owner also gets HBO on a monthly basis.

Senator GORE. Mr. Fuchs, the question is, Why do you require that $5 payment by the dishowner to the cable company that does not serve him.

Mr. FUCHS. That is my cost of maintaining a presence, a brand awareness? Who created the brand awareness. Who put it in the mind of the consumer? Who called me up for HBO? How did he know about HBO? Because that cable affiliate in that marketplace has been selling HBO for almost 15 years. So in order for me to have that cable operator—who says I am losing customers throughout my franchise, I now cannot afford to sell HBO, continue to aggressively market HBO, I pay him a marketing subsidy. I do not agree with the cable industry. I think the cable industry underprices us at retail. I am sold with a bunch of other brands. If I was pricing HBO at retail for the cable industry I think it should be priced at $15. Mr. Valenti talks about cassettes. You rent one movie in this country for $2 to $5. You buy HBO for month, you get over 100 movies and 50 other programs, so if you are talking about value——

Senator GORE. We are going a little far afield here. I want to focus on the precise question. You are saying that the dishowner has to pay that $5 a month to the cable company?

Mr. FUCHS. No; the dishowner pays me.

Senator GORE. And then you pay the $5 a month?

Mr. FUCHS. I choose to pay my cable operator in that franchise in order to keep the rest of my business, the 99 percent of my business in that marketplace. I want to be prominently featured.

Senator GORE. You want to keep the cable company happy, right?

Mr. FUCHS. I want—anyone in business wants to keep—the soda company wants to keep his bottler happy.

Senator GORE. Come on.

Mr. FUCHS. It is good business. I want to keep my distributors and the people who sell HBO happy, sure. I want to keep everyone happy.

Senator GORE. So it is a kickback to keep your major customer happy.

Mr. FUCHS. Senator, I do not know what connotation you put on the word "kickback," but it is done in a number of businesses. It is a marketing subsidy. It is—if my cable operator says to me, I am not selling HBO, I am showing Showtime, that distribution is the lifeblood of my business. If I do not incent him to sell HBO, then I have got real business problems.

Senator GORE. Now, when the dishowner gets HBO from you, you put your logo HBO with a little music and all that on the screen frequently, right? I mean, you promote your brand identification?

Mr. FUCHS. Sure, we try very hard to.

Senator GORE. Now, the cable company puts an ad in the newspaper occasionally, and uses the logo in it. It does not seem to me that that is worth $5 a month from every dishowner in that franchise area.

In fact, as you may be able to pick up, in my opinion, it is an outrage, and I feel that it illustrates the distortion of this market. You are owned by a multisystem cable operator. Most of your money comes from other cable operators, and the cable industry perceives competition and in fact is feeling competition from the dishes.

And so you tell the cable companies: Look, we do not really want to sell to dish owners at all, but we have been forced to by political pressure.

Mr. FUCHS. That is not the case.

Senator GORE. But relax, do not get too excited, because for every single dish owner we hook up we are going to give you $5 a month.

Mr. FUCHS. Senator, do you want a response?

Senator GORE. Please feel free.

Mr. FUCHS. You said all of these things in your press conference yesterday.

The cable industry does not tell me how to run my business. The cable industry provides a lot of money for our business.

Senator GORE. What percentage? 100 percent?

Mr. FUCHS. Very much close to it.

But I will tell you something. We are now slowed down dramatically in the cable business. The future of HBO now depends on special markets, such as backyard Earth stations, such as hotels and motels, such as SMATV. That is a very important part of our future.

That business is not necessarily in the cable industry's interest, but it is in my interest. And I plan on pursuing that business as aggressively as possible. And it is a very small price for me to pay for that $5, because you say he puts in a little ad, he shows your logo. Point of sale and placement positioning of the very competing brands—this is an enormously competitive business.

The placement of my brand in the lead position or the point of sale when the customer calls the cable company is the most critical thing in my business. If I am depositioned, if the cable operator is not incented to sell me, my business is in trouble.

My business has already slowed down. You may term me a monopolist in some type of business, but that is not the case. We are a very small player in the entertainment spectrum.

Senator GORE. Will you sell your program to a distributor other than a cable operator?

Mr. FUCHS. We will discuss the distribution of our programming outside of cable franchise areas with anyone who makes business sense to us.

Senator GORE. Do you currently sell it to any distributor other than a cable franchise?

Mr. FUCHS. Outside cable franchise areas, HBO is distributing its programming itself right now.

Senator GORE. Do you sell it to any distributor other than a cable operator?

Mr. FUCHS. No; we distribute also, Senator. I think we should make note here that for consumers who may have trouble getting TV service, get that equipment in your house and we turn you on in 15 seconds. Some of the staff members of this committee saw the demonstration last week.

It is the most remarkable technology in the telecommunications world now. And if we could get cable delivery done as easily—I live in Manhattan and you can wait 3 weeks to get cable turned on. The TVRO customer can get turned on literally in 15 seconds.

Senator Gore. I have lots of other questions. I have exceeded my time on the first round. I will come back to it.

Senator Pressler. But the reason—and I am going to get to Bob Bergland with a question here—the reason I cited the guy in the Black Hills who cannot get broadcast or cable signal is because apparently he pays the $12 and I guess they just keep the five extra dollars. There is no cable operator who gets the $5 in that case.

Senator Gore. They keep it.

Senator Pressler. That is why I was complaining about some of my constituents.

Senator Gore. Would my colleague yield just briefly?

Senator Pressler. Yes.

Senator Gore. You see, what is happening is there are two separate markets, the dishowners and the cable operators. If the marketplace worked without distortion and artificial control, then the supply and demand curves would cross at a different point in each of these markets. The dishowners have made a huge up-front investment. They have a larger selection of programming to choose from, and so the supply and demand curves would probably cross at a much lower point.

The cable customer is in a very different marketplace. What is happening here is that the programmers are controlled by the cable industry, by ownership, by contracts, by the fact that they get virtually all their money from them. And so there is an unspoken agreement that the price in this dish owner market is not going to be allowed to reach the market-clearing price, the supply and demand curves are not going to determine it.

What is going to determine it is the fact that the price is not going to be allowed to go lower than the price to the cable customer. That is what is going on. That is the distortion in this marketplace.

I thank you for yielding.

Senator Pressler. Secretary Bergland, how soon do you expect to enter into negotiations with program producers, and when do you realistically think that you will be prepared to go on the air?

And excuse me for calling you Secretary. I should call you Congressman Bergland, as you were when we first met many years ago. It is nice to see you here.

And let me add to that question: Do you feel that the large MSO's have played a significant role in inhibiting your chances of effectively competing in this market?

Mr. Bergland. Mr. Chairman, our joint venture with our finance affiliate, the Cooperative Finance Corp., has just been created, and we have our first board meeting set for August 6 and 7, at which time we will start to hire our staff and contract with expert consultants to proceed with the contacts, the negotiations, and get matters underway.

It is our intention to have this enterprise staffed and going so that we can offer packaged signals some time early 1987.

Senator Pressler. Do you expect to be able to negotiate with HBO and others?

Mr. Bergland. Yes, Mr. Chairman. We have already had a very preliminary contact with HBO, and we are meeting on next Monday with the Disney organization.

Senator **Pressler**. How about the large MSO's? Have they played a significant role in inhibiting or helping your chances of effectively competing in the market?

Mr. **Bergland**. They have not. They have not helped us nor hurt us. We are just starting these contacts.

Senator **Pressler**. Now, Mr. Fuchs, just for the record, I shall submit for the record hypothetical and specific organizations with *x* number of subscribers, and I want you to answer for the record if you would, as you said you would, how you would deal with them as compared to TCI or ATC in terms of volume discounting, negotiation, access, et cetera.

What I am told, quite frankly, is that you give the large MSO's preferential treatment. That is what I am trying to get at here. If this is the case, it will have a big impact on dish owners, dealers, and anyone trying to get into the distribution market. That is bad news for consumers, and we are not going to sit here and let that happen.

Let me say, my interest here is mainly with consumers because in my State that is what we have—consumers of these services.

Let me ask this question of anyone here, and I might direct this to anyone: Are the networks able to adequately address the white area problem through the use of translators, and if so how long would it take to install enough of them to cover all the white areas? Will the networks bear the cost of installing this equipment?

Mr. **Crump**. Mr. Chairman, both myself and Mr. Jones are not here representing the networks. We are here representing the affiliates associations. The present communications system, as you know, it is based on local television station signals.

I hasten to assure you it is the goal of all television stations to extend their signal to the absolute limit. Unfortunately, we have had placed upon us a freeze by the FCC for the past several years and therefore we do not have the ability to extend our television signals.

If I may use a personal example, our NBC affiliate in Tucson, AZ, is presently unable to deliver its signal to a significant number of Tucson home-based viewing homes because the translator channel they had been using for many years was taken back by the FCC for low power television use.

They have been in the process of trying to obtain another channel, but have run into the FCC freeze. We have a situation where these people are unable to receive the signal of their NBC affiliate and consequently the local newscast, which fortunately for me is rated number one in that market.

We see no end to this or solution to this problem in sight at the moment.

Senator **Pressler**. All right. Now, in my State I happen to represent a large number of people who do not have the option of cable and apparently never will. And some of them do not have the option of broadcast reception. That is a fairly small number.

Will each of you tell me, short of government regulation, how we can protect them?

Mr. **Crump**. There is no easy solution, but I firmly believe and the NBC Affiliate Association firmly believes, that we should do everything within our power to increase the local signal coverage. And we can do this by use of translators.

There are many in place at the moment, but we have not been able to extend our signals further because of the lack of ability to get approval on translators from the FCC.

Senator **Pressler**. But that would just take care of broadcast in those cases. They might be able to get one or two signals at the most, or three maybe.

Mr. **Crump**. Correct.

Senator **Pressler**. But in this day and age, someone living in a cable area can get several. I mean, that is a nice thing to say, but it really does not solve the problem for them, does it?

Mr. **Crump**. Senator, quite obviously we cannot address a problem that is neither created by, nor can be solved within our industry. We are only television stations. I understand what you are saying to me and I have sympathy for these people who cannot have this diversity.

Senator **Pressler**. I would like each person on the panel to give me a one- or two-sentence answer to my question. What do I say to my constituents who have that problem?

Mr. **Bergland**. Stay in contact with the local rural electric cooperative for the most recent developments.

Mr. **Crump**. Free over-the-air television is better than anything these cable people are telling you about.

Mr. **Austrian**. I think there clearly will be program packages available for satellite-delivered programming, which I think will be at prices below what cable customers are paying.

Senator **Pressler**. But that is not the case now.

Mr. **Austrian**. The misinterpretation everybody has today is that everything is scrambled. The best value that anybody can buy today is to buy HBO and Showtime and take everything else for free, because it is all unscrambled.

And I think, as was said earlier, we are a little bit ahead of the process. I think it clearly is.

Senator **Pressler**. But a year from now it will be scrambled.

Mr. **Austrian**. In late 1987 you will have most of the basics and all the premium services scrambled, and we fully intend to be a program packager and I fully believe——

Senator **Pressler**. So then what happens? That is what I am trying to get at.

Mr. **Austrian**. I think what is going to happen at that point, Senator, is that they will dial a 1-800 number and get a package of services at rates below cable rates.

Senator **Pressler**. But that does not exist today, does it?

Mr. **Austrian**. The price for Showtime and the Movie Channel today, Senator, is below what is being paid in cable systems today, yes.

Senator **Pressler**. Does anybody else have any one sentence answers for me?

Mr. **Fuchs**. Well, I think, Senator, one of the things that has not been said is, if you follow the history of electrical components, they start out quite expensive and come tumbling down very quickly. And I think descramblers, dishes, everything will come down very dramatically, and I think it will be very affordable.

I can't speak for the broadcast industry, but I think cable signals will be available at a very affordable basis, equipment will be very affordable. I do not know if the M/A-COM people today mentioned that they will be building descramblers into dishes, so the effective price of the descramblers will come down by more than half.

So we are really in the infancy of this right now. The progress that has been made in the last 6 months is quite phenomenal. The fact that the technology works as well as it does I think is quite phenomenal. I think the future for this over the next year or two is quite favorable—your constituents have been without television signals for decades, and I think the light is there quickly at the end of the tunnel.

Mr. JONES. Senator, for your constituents that you are concerned about, we are concerned as well because they are also our constituents. But I think one thing that has to be pointed out is that we have been giving them free service for 98 percent of them for years and will continue to do so.

But in the meantime, we have formed a task force to try to identify who these people are that are not receiving our free over-the-air signal. We are not a direct home service signal.

If you Senators can help us identify who those people are, we do not want to see the letters about HBO and everything else, but we would love for the individual stations and the individual states to see any letter from any constituent who can't get us, because it is very hard to find these people.

We talk about 98 percent or 98.6 percent. We really do not know, because as a station operator in Kansas City and Buffalo and in Philadelphia, I never received one letter from one person saying they could not receive my station and why did I not do something about it, never. I have not seen one letter from one station manager to date saying that.

I hear a lot of talk. We want to know who those people are, because they are our constituents. We are a free over-the-air signal and we will work to get them.

Senator PRESSLER. Can you make a commitment here about when you're going to do that when? Within the next 3 months?

Mr. JONES. Well, we have been in force since January trying to identify these people with our task force in different States. It is not a matter—once we identify them, then we have to figure out the affordability of reaching them.

Senator PRESSLER. That is the point.

Mr. JONES. The point is we are reaching 98 percent of the population. If there is a pocket of people we can reach with translators, we will.

Senator PRESSLER. I know what you are saying, but there are some people that are not being reached.

Senator Gore.

Senator GORE. Thank you, Mr. Chairman.

Again, I think this is a different kind of problem. But I want to focus on the other one for a moment here. Mr. Fuchs and Mr. Austrian, do you both comtemplate switching over to Ku-Band within the next 5 years?

Mr. AUSTRIAN. We have no present plans, Senator, at this point in time.

Mr. FUCHS. We are experimenting with Ku-Band right now.

Senator GORE. If you switch to Ku-Band, will you offer that for sale to home dish owners, also?

Mr. FUCHS. We are in an experimental stage. We have no policy. We have not given any thoughts to that.

Senator GORE. Well, I am asking you to give some thoughts to it as a policy matter. Will you offer it to home dish owners?

Mr. FUCHS. We will certainly take that into consideration.

Senator GORE. Well, why would you not? Tell me? You seem to be considering not offering it to home dish owners; is that true?

Mr. FUCHS. Well, Senator, we have just gotten to our C-Band policy and we are having quite a bit of conversation about it today. With launch capacity the way it is, for me to speculate when we will be broadcasting——

Senator GORE. I am not asking you that. I am asking you a policy question. You know what I am asking you.

Mr. FUCHS. Well, I am saying you do not normally establish a policy for something that is possibly so far down the road.

Senator GORE. It seems such a simple question. Either you will make your programming available to customers outside the cable industry or you will not. Are you telling me that there is a real possibility that, even though now you have been forced by political pressure to make it available on C-Band, that if you switch over to Ku-Band you are telling me there is a real possibility that you might refuse to sell to dish owners? Is that right?

Mr. FUCHS. I did not say that. I would love to respond more fully.

I have not been forced by political pressure to sell to C-Band. I am forced by business pressure to sell to C-Band. I need those customers. If I can leave this room impressing you with one fact, that is a very important marketplace to me.

Senator GORE. I am not impressed yet.

Mr. FUCHS. Well, we will work on it.

I think that you are asking me—and there is another issue here. If there are millions of C-Band customers and HBO goes to K-Band, I am going to be sitting with you here again, and you are going to say my real constituency has invested $1500 in a C-Band dish and you are now switching to K-Band, you are trying to frustrate their reception of the signal.

Senator GORE. I would appreciate it if you would answer the question that I asked. If you switched to Ku-Band—you see, some of these dishes are dual capable. The cost of a Ku-Band dish will likely be much cheaper because it will be smaller.

I am asking you a simple question. Here you are, a programmer owned and controlled by the cable industry——

Mr. FUCHS. Not correct, Senator.

Senator GORE. Are you owned by a multi-system cable operator?

Mr. FUCHS. Time Inc. owns HBO. They also own a cable company. I am not controlled by the cable industry.

Senator GORE. All right, you have answered it for the record. You are owned by a company that is one of the largest multi-system cable operators.

Mr. FUCHS. And they are also the largest pay television company.

Senator GORE. And nearly 100 percent of your revenue comes from the cable industry, correct?

Mr. FUCHS. Correct.

Senator GORE. OK. Now, you are going to switch to another kind of satellite, or you may, and you cannot tell me, you cannot give me any commitment at this time that when you do that, if you do it, that you will make your programming available to someone other than the cable industry?

Mr. FUCHS. I said we did not have a K-Band policy. I can tell you, as I said in my opening statement, we will do all that we can to get into every home in America. If that will mean K-Band——

Senator GORE. As long as it does not make the cable industry upset at you.

Mr. FUCHS. No; I did not add that statement. I said we will do all that we can to get into every home in America. What I am doing now—outside franchise areas, the hotel business, the SMATV business—is not in great favor with the cable industry. The cable industry does not regulate or control my business.

If there is more business out there and I do not run into the same type of conversation that we have in here by possibly going to K-Band, changing transmission, if there is satellite technology, we will have a policy that will allow us to get into as many homes as possible. If there is a K-Band business out there that is in our business interest, no matter what the cable industry says, that has to be something that we will seriously consider.

Senator GORE. Well, I find it incredible that you cannot just give a forthright commitment that you are going to serve dish owner, even after you switch formats to the Ku-Band. But let me move on.

Mr. FUCHS. The dish industry will always be able to get C-Band from us. There will not be a transition. Whatever comes down the road, there will be different satellite bands that will be broadcast up there, we are not going to leave behind C-Band customers that have not switched to K-Band or do not have a dual receiver behind us. I think that is an important thing.

Senator GORE. Mr. Austrian, you plan to package your program services with CNN and sell it to dish owners, right?

Mr. AUSTRIAN. Correct.

Senator GORE. How much does Showtime—how much do you now pay per subscriber for CNN?

Mr. AUSTRIAN. The arrangement that we have with CNN is we are a sales agent for CNN. We are not a distributor. And they have set a retail price of $25 a year for their service, which they are advertising nationally. They are charging all sales agents, I believe, $15 a year as sales agents, which leaves us a profit of $10, Senator.

Senator GORE. How much do you pay for your cable customers per customer? How much does Viacom pay for CNN per customer?

Mr. AUSTRIAN. I believe the cable rates are significantly less, somewhere between 10 and 20 cents a month.

Senator GORE. Approximately 17 cents per month, all right. Your company pays a wholesale price to CNN of 17 cents per month per viewer if it is a cable customer. You are proposing to pay $1 per month per customer if it is a dish owner, correct?

Mr. AUSTRIAN. I think the answer to that is yes, Senator. I think the proper direction should be to CNN, who set the rate. We negotiated as best we could and we have been assured that that is a national rate. That is not a rate that I set or picked.

Senator **Gore**. Why would you—do you see, it does not make sense? You see, from a business standpoint, there is something real funny about that. And it is the same kind of funniness that comes out of the market distortion that leads HBO to give $5 a month to somebody who is not even hooked up to the dishowner. It is the same marketplace distortion that causes a lot of other problems in this area.

Why would your contract with CNN be six times more for a dishowner than for a cable customer on the wholesale basis, when there is no difference in what you are getting from CNN? Can you explain that?

Mr. **Austrian**. I think you have to direct that to CNN, Senator. As I said first of all, the negotiations——

Senator **Gore**. You also think we ought to have another hearing, then?

Mr. **Austrian**. I am not suggesting anything.

First of all, there is two different sets of negotiations. I do not negotiate for the cable division, they do not negotiate for me. What was entered into with cable was history and I was not part of it.

This was a take it or leave it proposition, and my understanding is that there are several packagers or contemplated packagers of programming that have agreed to take CNN on this basis.

Senator **Gore**. That is right, and they are all cable operators.

Mr. **Austrian**. That is not true, Senator. CNN has made its product available to dish dealers, as well as satellite dealers, on the same basis that they are proposing.

Senator **Gore**. Have there been any contracts with distributors, other than TCI and Viacom and possibly HBO?

Mr. **Austrian**. I am sorry, I do not understand the question.

Senator **Gore**. For CNN.

Mr. **Austrian**. CNN to the best of my understanding has signed distributor agreements with the cable operators and they have signed sales agent agreements with anyone who is willing to take it on the basis I just outlined.

Senator **Gore**. All right. Let me tell you what I think is involved. I think that again Viacom and TCI have agreed with CNN to establish a wholesale rate for distribution to dishowners that is six times higher than the wholesale rate for distribution to cable customers, in order to push the price up as part of the same old gambit which I described earlier.

The name of the game is make absolutely certain that in no instance will the price to the dishowner fall below that price to the cable customer. That is the name of the game.

Now, let us say that I am a cable company and I call up HBO, Mr. Fuchs, and I say: I have got a customer here that I cannot serve with my cable, but I would like to sell, to retail the HBO signal. You would say: Fine, here is the signal; you can sell it to him, right?

Mr. **Fuchs**. Inside the franchise area, yes.

Senator **Gore**. What about outside the franchise areas?

Mr. **Fuchs**. Outside the franchise areas, HBO is selling its services.

Senator GORE. Wait a minute. I am the cable operator here and I want to retail your service to a customer who is just outside my cable franchise area. This guy has a dish, and I want to buy it wholesale from you and I want to retail it to this person just outside the franchise area.

Mr. FUCHS. The cable operator wants to sell it outside?

Senator GORE. Is that possible?

Mr. FUCHS. No.

Senator GORE. Why not?

Mr. FUCHS. I would rather sell that customer myself, because the cable operator is not performing any function outside the cable franchise area. He is not marketing, he is not promoting, and why should I be giving subsidies if he is not performing a function? Why would I not want to collect all of that money myself?

Senator GORE. Now, let us say that I am the same cable operator and adjacent to my franchise area is another cable franchise area. And a dishowner who is not getting cable from either one of the cable companies, who is just on the other side of that line, says: Look, I can not get a fair price from the cable operator in my area; I would like to have a little competition; I would like to make the marketplace work.

And he comes to me. I am the cable operator in an adjacent franchise area. Is it true that you prevent me from selling to that customer?

Mr. FUCHS. We respect the franchise lines.

Senator GORE. Is that a yes?

Mr. FUCHS. We have to keep a certain semblance of order amongst our customers. But these customers all have the option of not even dealing with the cable industry and dealing with us directly.

Senator GORE. Is the answer yes? If a cable operator wants to retail your signal to a dishowner, you prevent him from selling in an adjacent area, right?

Mr. FUCHS. Assigning territories to a distributor is quite common. We respect the franchise lines, yes.

Senator GORE. The answer is yes?

Mr. FUCHS. Yes.

Senator GORE. All right. Now, let us say that I am a business person who wants to retail your signal, and I satisfy you that I have the economic wherewithal, I have the billing procedures and so forth. I come to you and I say I want to buy your signal wholesale and retail it to dishowners. Will you sell it to me?

Mr. FUCHS. We will talk to anyone who presents us with a reasonable—

Senator GORE. I do not want to just talk to you, I want to sell it. I want to enter into a contract with you. You understand.

Mr. FUCHS. Depending upon what the business plan is. Someone mentioned Sears earlier this morning. We would certainly love to hear from Sears. The heavier volume of customers we could sell.

The point I tried to make a little bit earlier was that, right now, luckily there is a technology that does not need a truck to appear at your house. We are able to turn on, we are able to send the signal back and forth 55,000 miles within 3 seconds. We get customers to turn us on who call us and say I cannot believe I have been turned on within seconds. So we are able to be that distributor.

Senator GORE. But less than 2 percent of the marketplace has agreed to buy your product on that basis.

Mr. FUCHS. Senator, almost every channel is unscrambled, every basic channel, but now CNN; is unscrambled. There are movie services that are unscrambled, and we are astounded that we have approximately 30,000 subscriptions and that people are paying for something that they can still get for free somewhere else. We are very encouraged by that.

Senator GORE. I am not astounded that you have only 2 percent of the potential market because you are pricing it so high.

Now, Mr. Austrian, let us say that I am Bob Bergland. I come to you and I say, look, nobody can question our economic viability. We would like to retail Showtime to these dishowners. Will you deal with him?

Mr. AUSTRIAN. We will talk to him at this point. I know you have got the—

Senator GORE. You are all interested in talking, but you are not interested in dealing.

Mr. AUSTRIAN. Senator, the problem that you are posing to me is you do not want to allow me to be my own retailer. I want to make the profit on a direct retail basis.

Senator GORE. Will you or will you not deal with him?

Mr. AUSTRIAN. I have not yet heard from Mr. Bergland.

Senator GORE. You are familiar with a quote that I read earlier.

Mr. AUSTRIAN. I am familiar with it.

Senator GORE. It said you have no intention of changing the policy of not dealing with people like this. It says you do not see what it would gain.

Do you still have no intention of changing your policy of refusing to dealing with anyone to resell it?

Mr. AUSTRIAN. I will talk with anyone about reselling the product. I prefer, Senator, to sell it myself on a direct basis.

Senator GORE. You see, what the dishowners in America want is for you to let the marketplace work. They are not going to be satisfied if you just talk, because that is frankly just a stalling game. It is just a cover. Eventually you will be forced to do this. This whole thing is just backpedalling, because you are tied with the cable industry so much you do not want to make them unhappy.

Just for the record, you are not presently dealing with anyone other than cable operators to resell your signal, correct?

Mr. AUSTRIAN. Not correct.

Senator GORE. Who is reselling it?

Mr. AUSTRIAN. In the cable franchise, we deal with distributors that sell to hotels and motels. We sell to SMATV, so there are——

Senator GORE. To dishowners?

Mr. AUSTRIAN. Dishowners, no. It is ourselves on a direct basis or the cable operator in the franchise. Outside the franchise, we deal direct.

Senator GORE. Is it a coincidence that both HBO/Cinemax and Showtime/the Movie Channel have the same policy of refusing to deal with anyone other than a cable operator? Did you just arrive at that?

Mr. **Fuchs**. Senator, it makes a lot of sense to be your own retailer. Earlier you complained about the cable industry's influence over us because they deliver most of our revenue to us. Maybe in the outside cable——

Senator **Gore**. And because they own you.

Mr. **Fuchs**. Well, the cable company does not own me.

Senator **Gore**. A cable company does.

Mr. **Fuchs**. The cable industry does not own my business. Time, Inc. owns us.

Senator **Gore**. Which is a cable company.

Mr. **Fuchs**. No; it is a communications company.

Senator **Gore**. Well, we have been around that barn before.

Mr. **Fuchs**. Well, HBO is a bigger company within Time, Inc., than its cable investment is, and so I wonder where Time, Inc.'s, thoughts are on that. So I have never been told by Time, Inc., management to be careful about the cable industry or take my instructions from the cable industry.

The question is efficiency? I know of no product on which you can get on the telephone right here, order the product and have it in 15 seconds. This is a terrific product in terms of its efficiency.

You have dwelled on the retail pricing. We are now retailers for the first time. We have been wholesalers. We spent $15 million to develop the technology. We have a tremendous facility in Chicago now to answer telephones and deliver the service. We have tremendous retailing costs right now, which are the difference between—you cite a difference in the retailing price between cable and the TVRC business.

Senator **Pressler**. I think the line of questioning by everyone here indicates the need for another hearing, but the chairman has asked me to wrap this up by 1 p.m.

I do have several additional questions that I will ask for the record.

We will be examining the responses to those questions, and I believe that my present thinking is to join my colleague from Tennessee in asking for another hearing because I am very disturbed at some of the things that I have heard. I know that we could go on here for a couple of more hours, but I would ask that perhaps within 2 or 3 minutes we could wrap this up.

Senator **Gore**. I will certainly comply with your request, Mr. Chairman. I am delighted that you are joining me in asking for an additional hearing, because there are a lot of witnesses we have not heard from.

I would like to hear from the owner of TCI about these threats, the coercion to force advertiser-supported programmers to scramble or else be driven into bankruptcy because they depend on the cable industry for all their money. I would like to learn more about that.

I would like to hear from some of the other witnesses that are not here and explore this in much more detail.

In view of the time pressure and in view of the fact we have run overtime, let me just conclude with a very brief statement.

What this industry needs is competition. In answer to the statements earlier from both Mr. Fuchs and Mr. Austrian, why would we want anyone else to retail it when we can retail it ourselves, the answer to that is in our country we believe that the public benefits from competition. The marketplace will almost always work if it is not artificially controlled.

The statement was made earlier that the cable industry controls the supermarket. Well, the cable industry should not be allowed to control the satellite dish market. If we allow competition, the supply and demand lines or curves will cross at an actual market clearing price.

In order for that to happen, we have to remove the distortions from the marketplace. The bill that I introduced yesterday focuses in on that one key to the problem. Unleash the river of competition by taking down the dam which is preventing it from flowing at the present time. Specifically, require Mr. Austrian and Mr. Fuchs and the other premium programmers who are so close to the cable industry, getting virtually 100 percent of their revenue from the cable industry to establish fair reasonable business standards against which to measure the viability of a retailer.

Then, once a retailer meets those business standards, prevent them from discriminating against that retailer simply because he or she happens not to be a cable operator. That is the key to the problem.

I hope that members of this committee will join me in pushing that approach aggressively, as I intend to join with Senators Ford and Bumpers in addressing the problems in the descrambler part of the business.

In closing, I certainly want to urge the Justice Department and the FCC to move expeditiously. I would also like to request that the Federal Trade Commission open an active investigation of the anticompetitive restraints of trade that are taking place in this industry.

What we have in terms of the Sherman Act, and the way the courts have interpreted it, is a concerted refusal to deal. Under the Sherman Act, that is a per se violation of the antitrust laws. If those laws worked, it would be ruled illegal. The practices that are going on in this industry are scandalous, in my opinion, but the laws are not working. As a result, the Congress has to step in, remove the distortions in the marketplace, and foster competition.

Thank you, Mr. Chairman.

Senator **Pressler**. I thank my colleague, and let me say in closing that this is my 12th year in Congress. I believe we came to the House together, and I have been amused by how every time a new technology comes on line, the existing technology tries to block it out. I remember when the cable people were fighting with the broadcasters.

There is plenty out there for everybody, and there is no need for one group to try to block others out, because it is like being at a great buffet table. It is unfortunate that some people are trying to keep a few people away from the buffet table, because there is plenty for all if there is competition.

I was elected to Congress on a program of lessening government regulation, but that is assuming that there is competition. I certainly hope that there are people out there at the grassroots level who are very angry. They see what is going on, and they know what is going on. Everybody in this room knows what is going on, no matter how convoluted some of the answers may be. It has got to stop, and that is all there is to it.

I am going to join in seeking another hearing, based upon what I have heard today. I came in here with a fairly open mind but I did not hear answers to some of the questions. I think it is outrageous what is happening. That is my present conclusion.

In any event, I thank my colleagues, I thank our witnesses, and I adjourn this hearing.

[Whereupon, at 1:20 p.m., the hearing in the above matter adjourned, subject to the call of the Chair.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF MICHAEL E. BRUNNER, EXECUTIVE VICE PRESIDENT, NATIONAL TELEPHONE COOPERATIVE ASSOCIATION

NTCA is a national trade association which represents more than 450 small, independent cooperative and commercial telephone companies throughout rural America. We serve millions of subscribers in some of the most high-cost, sparsely populated areas of the nation. Our goal is to ensure that rural Americans receive telecommunications services on par with those available to urban residents.

NTCA would like to share our concerns about the potential effects of program scrambling on earth station owners in rural America. The questions we raise about scrambling are not parochial, but are questions that are troubling rural Americans all over the country. We request that a copy of this statement be included as part of the record in the hearing conducted by the Senate Committee on Commerce, Science and Transportation concerning the scrambling of satellite television signals.

BACKGROUND

Home satellite earth station technology has ushered in a new age in the reception of direct-to-home video communications. In distinct contrast to radio, television, telephone and cable, the benefits of satellite were first realized in the most rural parts of the country where people are denied access to both broadcast and cable TV because of the remoteness of their residences. Now dish owners living on farms and ranches and in small towns are afforded comparable access to information and entertainment as urban people.

However, rural American's access to satellite programming is threatened by the decision of programmers to scramble their programs and the methods employed by those programmers to distribute such programming.

NTCA recognizes the fact that programmers have the right to scramble to protect their signals. However, we feel that they have a responsibility to make their programming readily available to earth station owners at fair and reasonable rates. We are concerned that, unless a fair and effective system for marketing programming is established, the result could be unreasonable prices for programming and the unavailability of programming except through limited sources. Rural viewers should not be denied access to programming because of the policies presently in practice.

THE ROLE OF THE CABLE COMPANIES

We are concerned about the marketing plans some programmers are using to offer their pay services to earth station owners. For example, in the spring of 1985, HBO announced that it was authorizing cable operators to sell HBO and Cinemax services to earth station owners within their cable franchise areas. Under the plan, the earth station owner acquires a decoder and then calls the cable operator to obtain the programming and to arrange for the decoder to be activated. Each cable system sets its own prices for these services. The result is that cable operators have a marketing advantage over other potential program distributors and earth station viewers are not receiving the benefits of an open, competitive environment.

HBO's marketing plan and the fact that other pay program suppliers might adopt similar plans indicate that steps should be taken to protect the viewing rights of rural Americans. Programmers should recognize that rural consumers would be better served if competitors to cable have the opportunity to make programming available to an already underserved segment of our population and negotiate marketing plans with other entities which express an interest in providing program services.

REASONABLE PRICING OF SCRAMBLED PROGRAMMING

NTCA believes that scrambled programming should be available to earth station owners at reasonable prices. We realize that the term "reasonable" may appear to be imprecise. However, an adequate working definition of a "reasonable price" is that the earth station owner should pay prices comparable to those paid by the average cable subscriber.

Under HBO's marketing plan, earth station owners living outside of cable franchise areas buy the programming directly from HBO. They pay $12.95 for HBO, $12.95 for Cinemax and $19.95 for both. Published articles in the broadcast trade press indicate that cable customers are charged an average of $6.95 per month to receive a package of basic cable services. Other trade press articles report average prices of $10.95.

With respect to subscription services, the cost to consumers ranges from $6.95 to about $19.95 per month, depending on the amount and type of subcription service. In contrast, it is much more expensive for dish owners to obtain programming directly from the programmer. The price discrepancy between what cable operators charge their subcribers for programming and what earth station owners are being charged appears to discriminate against dish owners.

NATIONAL RURAL TELECOMMUNICATIONS COUNCIL

Because adequate telecommunications services are an important component of the quality of life, positive action is required to ensure that the needs of rural America are not neglected as the importance of satellite communications technology coninues to grow. To assist in the effort to provide modern telecommunications services to rural areas, we joined forces with the National Rural Electric Cooperative Association (NRECA) and the National Rural Utilities Cooperative Finance Corporation (CFC) to form the National Rural Telecommunications Council (NRTC).

The NRTC is the vehicle which will be used by telephone and electric cooperatives to bring the benefits of satellite technology to rural America. We will provide a variety of programs and services which will facilitate those cooperatives' involvement in the satellite communications business, including the provision of scrambled programming to their customers.

The scrambling issue is a major priority of the NRTC. Our plan is to assemble a basic package of scrambled broadcast signals and make it available to dish owners at an affordable monthly cost. The basic service will probably include several "super stations," sports, news and a family-oriented movie channel. We also plan to offer, on an add-on basis, other cable-type program sevices. We plan to begin marketing this package to rural customers in early 1987. However, the success of this endeavor will depend largely upon the willingness of the programmers to negotiate acceptable terms.

Rural telephone and electric systems are in a unique position to provide scrambled programming to rural Americans at affordable prices. There is demand for this service. An NRECA survey revealed a potential market of 1.2 million rural Americans. In addition, the infrastructure is solidly in place. Rural telephone and electric systems have been engaged in providing reliable, affordable service in rural areas for decades. They are well established and known in their communities as vital, responsible business. It would not be difficult for them to set up separate subsidiaries for satellite telecommunications purposes.

LEGISLATION

Mr. Chairman, we are very concerned that rural home earth station owners not be harmed by anticompetitive behavior which would make it difficult, if not impossible, to receive programming. Therefore, we support legislation which would ensure the marketing and distributon of satellite programming is conducted in a competitive marketplace at reasonable rates.

CONCLUSION

We believe that programmers have the right to scramble their signals and that earth station owners should pay a reasonable price for access to those signals. However, we oppose exclusive distribution plans or any other marketing scheme which would exclude or limit the independent distribution of scrambled programming. A competitive market should be allowed to operate both inside and outside of cable areas. We support legislation which would improve telecommunications services and create a more competitive telecommunications environment in rural America.

Thank you for the opportunity to present our concerns to the Committee.

STATEMENT OF A. DEAN PETERSEN, PRESIDENT, TDS ENGINEERING CO., INC.

I am Dean Petersen, President of TDS Engineering Co., Inc. My company provides engineering and technical services for cable television, broadcasting and video surveillance.

The general focus of these hearings have been on the public policy implications of satellite programmers scrambling their signals and access of this programming to dish owners. This testimony has relevance in the consumer protecting area of this debate both from an obsolescense standpoint and consumer privacy. First, I will present a digest of these issues with the text of my testimony following under headings of: Obsolescense of C-Band Home TVRO and Consumer Privacy.

Until 1984, this country had a private satellite communications system in the so-called C-Band. The unauthorized interception of information not intended for receipt by the public at large was illegal.

In 1984, as part of the enactment of the Cable Communications Policy Act, Congress established a new Section 705, legislating new penalties for all unauthorized interception of private communications. However, in an eleventh hour amendment, Congress inadvertently undertook a major shift in national telecommunications policy. Individual satellite dish owners were authorized to take certain satellite information—satellite cable programming—not intended for them and without the authorization of the information provider. Congress has encouraged backyard dish owners to think they are entitled to take information from private C-band satellites regardless of the desire of the information owner. How can the Congress expect the dish owner to understand that he is not entitled to private newswire channels when he is told that he is entitled to Cable News Network; that he is not entitled to the network backhaul sports, but is assured access to ESPN, all on the same type satellite. What is the difference between legislating access to video and non-video information and between entertainment and non-entertainment information if it is all transmitted on private C-band satellites not intended for the public at large? There is no real difference—it's all there for the taking!

As radical as this was, this was not the extent of the damage to private satellite communications.

Consumer satellite receiving equipment is capable of receiving much more than just cable programming. Thus, dish owners can intercept everything in the sky, both in the "C" and "KU" bands—private business data, computer information, telephone conversations and even military data. Moreover, private terrestrial microwave communications can be intercepted as well. As a result, a serious breach of communications privacy now exists which is far more serious than the highly publicized satellite jamming of HBO by "Captain Midnight." This breach in private communications was created because legal access to specified satellite cable programming being transmitted in the private communications domain exposes to the public all other forms of private, domestic, military and government communications simultaneously. Well-intentioned as this legislation was, and even though Section 705 sets severe penalties, private signal interception is done with impunity in the privacy of the violator's own home.

Interception of all forms of private communications by home TVRO owner, (dangerous as it is), is merely a manifestation in abuse of our private communications system, and the rights of communications consumers, fostered by Section 705 of the Cable Communications Policy Act. It is ironic that Congress has risked the privacy of all private communications and is now attempting to stop encryption of some of these private signals.

The real issue is the devastating effect of digital (broad spectrum) terrestrial microwave interference upon new and existing home TVRO consumers. Here are the facts:

1. There are approximately 5,000 existing C-Band terrestrial microwave routes in the continental U.S. today. In the next few years, they will be upgraded to new digital (broad spectrum) transmission technology.
2. Use of C-Band digital (broad spectrum) terrestrial microwave routes is expected to double in the next few years from 5,000 to 10,000 routes or more.
3. Digital (broad spectrum) terrestrial microwave interference will eliminate clear, C-Band satellite reception in as much as 35% of the continental U.S.
4. Digital (broad spectrum) terrestrial microwave interference can only be suppressed by shielding the antenna (with earth or screen) or by phasing which costs approximately $3,000 per channel. Special traps and filters will no longer work.

This interference will affect consumers in the following ways:

1. The degree of interference will vary from total wipe out of all satellite signals to an unviewable picture for both existing and future home TVRO consumers.

2. The consumer whose dish is less than 4.5 meters (15') in diameter has no legal protection from interference. Larger dishes can be protected from interference by the FCC at additional cost of thousands of dollars depending upon existing interference levels at the desired site.

The Communications Act of 1934 set public policy under which private and public communication were established. Because of technological advancement, it became possible to pirate private cable satellite programming, commercial network programming, sports backhaul feeds, and others. Section 705 of the Cable Communications Policy Act of 1984 did not make illegal the unauthorized interception of cable satellite programming under certain circumstances, yet at the same time, it unwittingly exposed all other forms of private communications "for the taking". It is the very nature of private communications policy that is in direct conflict with Congress' efforts to declare private communications public. It will take time (maybe 10 years) to secure all private communications and in the meantime, how shall private communications be protected? If encrypting all private communications were the solution, then all taxpayers/consumers will end up paying for it. Congressional efforts to prohibit scrambling and set rates are superfluous, private communications encryption could cost consumers 10,000 times more than any rate savings realized through Congressional action. Furthermore, full encryption of all private communications is not even a viable alternative because as many as 35% of all C-Band dish owners in the continental U.S. will be interfered with by a new technology, (digital broad spectrum) terrestrial C-Band microwave transmission.

The FCC has managed the radio frequency spectrum of this country for more than 50 years. It has responsibly exercised its Congressional mandate in assuring the public's constitutional right to privacy through effective management of both public and private domain in communications. Congress can preserve and protect the public's right to privacy and freedom from interference by simply moving the public DBS effort to the band specifically designated by the FCC for that purpose.

Rationalize this dilemma anyway you care to, it is an undeniable fact that the home TRVO technology is facing obsolescense created by the very spectum space that it is attempting to occupy. Consumers, indeed many laymen, have the misconception that laws governing broadcast television also govern private communications bands. (Where cable satellite programming is located.) This is simply not true. The C-Band is definitely not a consumer friendly communications environment and it was never intended to be. Thus, the C-Band direct concept, should not be promoted by Congress as public policy. The FCC has defined Direct Broadcast Satellite (DBS) service as a radio-communication service in which signals from earth are retransmitted by high power, geostationary satellites for direct reception by small, inexpensive earth terminals. The commission assigned a portion of the Ku band (not C-Band) for DBS service.

Ku band DBS as authorized and regulated by the commission contains everything that Congress is attempting to re-invent including consumer rights and protection from interference.

I have asserted that the emergence of a new technology, C-Band digital (broad spectrum) terrestrial microwave interference will severely impact existing and future home TVRO consumers and I've supported my assertion with documentation.

It is imperative that Congress freeze all consumer sales of C-Band satellite receiving equipment to preclude further purchase of this obsolete equipment by unsuspecting consumers. Hence, I respectfully urge Congress to expedite an FCC investigation into the impact of this interference upon existing and future C-Band home TVRO consumers.

It is, therefore respectfully suggested that Congress:

1. Freeze all sales of home TVRO equipment pending the outcome of an FCC investigation into the impact of C-Band digital (broad spectrum) terrestrial microwave interference upon existing and future home TVRO consumers.
2. Establish the Direct Broadcast Satellite Bank as the radio frequency spectrum source of all DBS activity in the continental United States.
3. Limit consumer satellite receiving equipment capabilities to (Direct Broadcast Satellite Bank) public domain communications only.
4. Encourage development of programming availability for DBS consumers.
5. Co-ordinate public transition from C-Band to DBS.

OBSOLECENSE OF C-BAND HOME TVRO'S

There are many consumers in this country who cannot receive C-Band satellite television because of severe analog and digital terrestrial microwave interference ("TI"). Initial estimates indicate (See Exhibit I attached hereto) that the number of existing and future (digital "TI") impacted (consumer home installation) could approach 17 million in the continental U.S.

This interference is readily acknowledged by a recent SPACE ("TI") publication and I quote: "Many of the TI-free sites have already been sold and much of the remaining business is in TI plagued areas." (See Exhibit F attached hereto)

This, I submit, has contributed to a portion of the home TVRO dealer failures. Moreover, these 17 million homes far exceed the 400,000 receiving inadequate network service, and equal those homes not served by cable. Licensing and construction of C-Band terrestrial microwave is accelerating.

At present there are approximately 5,000 existing C-Band terrestrial microwave routes in the Continental U.S. Use of C-Band terrestrial microwave is expected double in the near future, from 5,000 to 10,000 routes or more.

All new routes will employ digital modulation at the outset, and existing routes will be upgraded to digital technogology as common carrier depreciation and capacity requirements dictate. Digital (broad spectrum) C-Band terrestrial microwave transmission interference means obsolescence for C-Band home TVRO's.

Some of the sources of this interference are AT&T, GTE, and MCI. This obsolescence is being caused by technological advancement in private communications. Therefore, obsolescence is thus being created by the very spectrum space which home TVRO's are attempting to occupy. Previously, IF and RF traps and filters have been used to reduce or eliminate C-Band FM analog terrestrial microwave interference. With the new digital technology they are totally ineffective. An existing C-Band home TVRO installation employing these traps and filters is thus rendered useless to the consumer when digital conversion occurs. Now many consumers attracted by free satellite cable and network programming, will soon be trapped in a maze of interfering microwave routes through no fault of their own. With an estimated $800 billion in C-Band microwave equipment and plant, it is obviously not economically feasible to move private communications out of C-Band to accommodate the back yard dish owners' interference problems, but it is very feasible to move these consumers to a frequency band (DBS Band) designated by the FCC for their use and protection from interference. Furthermore, most of the necessary equipment already exists in the home TVRO industry at this time to accomplish a conversion at minimal cost.

Universal Public domain communications coverage of the Continental U.S. has not been accomplished. Broadcast television comes the closest with 98% terrain, population density and economics are the limiting factors. Home TVRO C-Band satellite coverage is approximately 80%, C-Band analog and digital terrestrial microwave interference and security of C-Band private communications are the limiting factors. The C-Band home TVRO technology is definitely not a panacea here, freedom from C-Band digital (broad spectrum) terrestrial microwave interference cannot be guaranteed anywhere in this country, not even in rural areas.

I call your attention again to Exhibit F,[1] this SPACE publication does not even mention digital terrestrial microwave interference, the cost of eliminating it, the eventual analog/digital conversions and its effect upon existing home TVRO consumers. Exhibit F at page 2, third paragraph merely states and I quote: "Oh yes, and did I forget to mention money?" Furthermore, consumers are given the impression, that their backyard dishes can be licensed which is partially true, however, the rest of the truth is:

a. Only if specific FCC dish size and or interference level criteria are met.
b. Only if frequency co-ordination is done, approximate cost $1,600.00.
c. Frequency protection must be maintained after licensing at an annual cost of approximately $180.00.
d. In April of 1987, the FCC will begin charging $100.00 each for TVRO licenses.

The real facts indicate that to license a home TVRO and protect it from interference would cost far more than the $1,500 to $2,500 price tag touted by dealers. Possibly as much as $5,000 to $7,000 more. It is clear, the DBS band is the proper place for this type consumer activity.

CONSUMER PRIVACY

Private signal interception is touted to the public by publications in many ways, and I quote:

"That phone call you made to Grandma at Christmas, the USA Today newspaper at your doorstep, the $500 your dad wired you for college—all probably connected via our domestic communications satellite network.

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[1] The exhibits were not reproducible.

"Much as you would turn on your shortwave or scanner and monitor the actions in these bands, some monitors are now tuning in the satellite bands and enjoying the action that can be heard and seen." [2]

There can no longer be any doubt that we are viewing a very serious privacy breach. Electronics publishing houses, the home TVRO trade press and even some members of SPACE are actually widening this privacy breach. The Whole Earth Review touts a book titled "The Hidden Signals on Satellite TV" co-authored by Bob Cooper, Jr., a founder and Thomas Harrington, a board member of SPACE. Mr. Robert Horvitz states:

"With more satellite-relayed TV programs being scrambled, backyard satellite dish promoters are starting to publicize the fact that your dish enables you to monitor other types of satellite-relayed signals, too. This book tells most of what you need to know to monitor long distance phone calls, news agency teletype, stock and commodity prices, corporate data communications, audio service, etc. I'm not recommending you use your satellite dish that way. The importance of this book is in showing that it's relatively easy to do, using off-the-shelf equipment. I'd be leary of taking them as gospel, but it's the descriptive passages that really matter, and there is no more explicit and detailed how-to manual currently available."

The Whole Earth Review continued:

"On some pure data and telephone transponders (non-video), you may hear something that sounds like a buzz saw, or something that sounds like musical chimes, or you may hear a telephone circuit ringing or a busy signal. On the active telephone channels, you will hear telephone conversations, some radio feed, communications circuits between the satellite control operators, hotel and motel reservation sections, auto rental companies; at any given moment, you could find between 600 and 1,200 separate carriers in place!" [3]

The same "Hidden Signals" book is touted by Grove Enterprises, and I quote:

"The most carefully guarded secret of satellite TV is now out. Hidden between the entertainment channels is a world of two-way communications intrigue and special subscriber services.

"Stock market reports, long distance telephone, news and press teletype, business tele-conferencing, scientific dialogue, special sports events, background music and National Public Radio—all regular listening fare if you are properly equipped. And this book tells you just how to do it!

"If you have a satellite TV set up or plan to install one, you can't afford to be without this information-packed book which will open a new horizon of monitoring for you!" [4]

I call your attention to the preface of "The Hidden Signals on Satellite TV" book in which the author seems to believe that the interception of private satellite transmissions itself does not violate Section 605, hence 705, and I quote:

"Section 605 of the Communications Act of 1934, as amended, generally warns you that non-broadcast class communications signals are considered 'private' communications. The 1934 act was designed to establish guidelines to prevent unauthorized 'third parties' (i.e. anyone not associated directly with the private communications) from setting out to intercept such private communications. Section 605 warns that any person not authorized to intercept such transmission and who does so, either on purpose or accidentally, shall not divulge to any other party any of the following: (a) that such a transmission exists; and (b) the content of the transmission 'intercepted.' In another section of the FCC rules, the FCC treats all microwave (i.e. satellite) communications in the 3.7 to 4.2 GHz band as 'common carrier' transmission, and thereafter confirms by definition that all common carrier transmissions are considered non-broadcast (as in private) transmissions. 'These rules were adopted at a time when the primary concern was with "eavesdropping" on private overseas and domestic telephone communications and, in studying the debate of the era, it would appear that the real concern was with the employees of the teleco/common carrier who might have access in their work routines to these circuits. The Congress clearly was worried primarily about common carrier employees eavesdropping. In the intervening 46 years, the whole nature of communications has changed, including the use of some common carrier transmission frequencies for non-common carrier type signals." [5]

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[2] Van Horn, Larry, *Communications Satellites,* published by Grove Enterprisises, Inc., Brasstown, N.C. 28902, p. 29, paras. 1 and 2.

[3] *Whole Earth Review Catalog,* 27 Gate Five Road, Sausalito, CA 94965, at p. 45.

[4] *Grove Enterprises, Catalog,* revised 4/1/86, Box 98, Brasstown, N.C. 28902, at p. 27.

[5] Cooper, Bob Jr., and Harrington, Thomas *The Hidden Signals on Satellite TV,* ISBN #0-916661-04-0, copyright 1984 by Universal Electronics, 1st Ed., at Preface, p. 1.

It certainly appears that the purpose of the book is to provide the reader with a road map for stealing any number of unauthorized non-video services off of the satellite. Nothing has changed in the intervening years except technology. The law remains the same. Anyone, including home TVRO owners, intercepting private communications violates the law including home TVRO owners. This "wonderful new" technology provides the public with all of this nation's satellite C-Band private communications. If this is in fact the case, a bank president can legally eavesdrop on the communications of his competitors and then act in accordance with the intelligence thus derived. At risk here are not only private domain communications, but military, government and intelligence communications. The book, "Communications Satellites," [6] contains classified military satellite information on photographic reconnaissance, early warning satellites, nuclear explosion detection, FERRET, navy ocean surveillance, military/government communications satellites and much more. In a democracy, the interceptors of these private communications are the true terrorists. I call your attention to the "Hidden Signals" book, which, at page 45, presents a copy of a telephone bill transmitted by Satellite Business Systems ("SBS"). I contacted SBS at 1-800-368-6900 (the number is shown on the bill) to verify the authenticity of the bill and phone number. I spoke with Mr. Ken Schloe, as SBS customer service representative. Mr. Schloe suggests only two ways such a bill could be acquired legitimately. The authors either photocopied a bill of their own or acquired the bill through an account number reference to SBS. I respectfully submit that this bill could have been hacked by intercepting an SBS data stream from a C-Band satellite by anyone. (See Exhibit E attached hereto.)

Increasingly, more dish owners are discovering how easy it is to break into our private communications. I call your attention to the book entitled "The Hidden Signals on Satellite TV." I would be happy to provide any member with a copy upon request. The book is co-authored by Bob Cooper, Jr., a founder of SPACE, and Thomas Harrington, a board member of SPACE. It instructs the reader how to intercept long distance telephone conversations, electronic newswire transmissions, radio network, motel reservations and, in general, all private communications. This is not the only publicity afforded this conduct. The October and November, 1985 issue of "TV Satellite Video World" contains similar information. All that is needed for this indiscriminate thievery is the typical C-Band satellite dish, a small amount of off-the-shelf or used equipment available from a retailer such as "Radio Shack," and the knowledge of its easy access.

It does no good to respond that the interception of some types of private information is against the law. This illegal activity is unenforceable when it occurs in the privacy of a violator's home.

The "Captain Midnight" HBO jamming incident, in my opinion, is not nearly as dangerous as the potential for interception of not only private domestic telecommunications, but military and government communications and intelligence. The book, titled "Communications Satellites," [7] contains a classified listing of U.S. Military and government satellite communications frequencies, surveillance satellites and much more. As you will soon realize, the scope of this proceeding must be broadened to include many much more serious privacy questions. Our concern should be for the communications security of millions of Americans. Without secure private communications, American industry and commerce cannot long survive. If HBO wants to limit distribution to certain affiliates in a given area, is this any different than a medical information service wanting to limit service to its hospital affiliates? There is a place for the home satellite dish industry here, but it is not in the private communications C-Band or any other. Attempting to guarantee access by the public in a private communications environment can only result in the destruction of our private communications system and our personal and business privacy as well. For those members of Congress who would request it, I can demonstrate the ease by which the C-Band dish owner can access all sorts of private information.

STATEMENT OF DIANE DAVIS

When my husband, daughter and I moved to the Ozark Mountains of Arkansas in the fall of 1979 to be near his senior citizen parents, we never dreamed that we would ultimately be discriminated against for being rural Americans: however, that is what I perceive to be happening at the present time.

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[6] Van Horn, Larry, *Communications Satellites,* published by Grove Enterprises, Inc., Brasstown, N.C. 28902.

[7] Van Horn, Larry, *Communications Satellites,* published by Grove Enterprises, Inc., Brasstown, N.C. 28902.

My husband is a teacher, we are a one-income family putting a daughter through college, and the purchase of a satellite dish was financially difficult for us. We reside in the town of St. Joe, Arkansas, which is located in the Ozark Mountains in the northwestern part of Arkansas. The Ozarks cover approximately 60,000 square miles, taking in the southern half of Missouri, the northwestern third of Arkansas, and westward into the edge of Oklahoma. It is a rugged, isolated region, consisting of tall ridges, limestone bluffs, natural caverns and spring-fed streams and rivers. While it has a mystic beauty that captivates many, it is the same terrain which wreaks havoc with a television signal. Therefore, we receive only one network affiliate station (NBC) out of Springfield, Missouri, one hundred miles north, which is not even our own affiliate; needless to say, we are unable to receive any Arkansas news. Furthermore, we are unable to receive CBS or ABC at all. (This statement is corroborated by a report to CBS by our local CBS affiliate in Little Rock, Arkansas, who, on March 22, 1986, conducted a signal testing survey on our property; a copy of this report is on file in Senator Dale Bumpers' office.) During the spring and summer months, we are afflicted with a weather condition known as temperature inversion, which literally scrambles our television picture and sets up a loud audio buzz, making it impossible for us to even receive that one NBC station from Missouri. For days and weeks at a time, we are able to only receive hit-and-miss programming.

We contacted the cable company thirty miles away, but they said it was not lucrative to come out this far. We consulted local antennal specialists and made sure we had the proper equipment—a VHF antenna designed specifically for fringe areas, a signal booster, and a taller antenna mast—but it did not improve our situation.

Two years ago, after suffering such intolerable television reception, we purchased a satellite dish, which is really nothing more than a stronger antenna. We now receive a clear, crisp picture from all three broadcast networks. We did not think of ourselves as pirates, crooks and thieves, as the cable industry, premium programmers, broadcast networks and media like to label us. All we desired was the opportunity to view quality television programming—something most people take for granted. At the time we purchased our dish, we were aware that HBO and several other programmers had plans to scramble. However, we were willing to pay a fair and reasonable price, which, I might add, has yet to occur. What we had not anticipated were the scrambling plans of the advertiser-supported, three major networks. Since ninety to ninety-five per cent of our television viewing is spent watching network programming, I am totally opposed to their scrambling plans. Because they exist in the best interest of the public, because they do not fall into the same category as the premium programmers, and because I pay for them by purchasing the products they advertise, I believe my First Amendment rights are in jeopardy here—my right to know and my right to the free flow of information. They claim they are worried about their raw newsfeeds. I understand that. So why not scramble those ray newsfeeds and leave one feed open for prime time programming? They claim they wish to protect their affiliates. I understand that. But as I've just stated, I do not receive their affiliate. However, for dish owners who do, there has been no hard evidence that those people are by-passing their local affiliates. What I do not understand is the reluctance of the networks—CBS in particular—to work with us in an honorable fashion as to resolve this situation.

CBS has now instituted a task force to study this issue. They claim there are some 400,000 homes in the United States that cannot receive their signal. Figuring an average of 2.4 persons per household, that is nearly 1,000,000 people who cannot receive CBS. And I maintain that is still an underestimation. Furthermore, I believe that even if only one person cannot receive a network signal, that is one person too many. In a day and age, when rural America is able to receive electricity and telephones, I state that it is not asking too much to expect the same from our television broadcast networks.

CBS has now decided the great answer to all our problems is the translator and the low power television station—the translators to be installed by local affiliates, or low power television stations to be privately financed. They are touting this solution to the rafters. At first, when I heard this, I felt hopeful that this might be the answer to our viewing problems. I am *not* anti-affiliate since I realize the affiliates do provide a vital service to the community. In fact, altruistically speaking, a translator would also benefit others in the Ozarks who are not satellite dish owners. But then I decided to research the low power subject. After peeling away the outer layers, the flaws leaped forth and I discovered that translators and low power television stations were *not* the answer for many Americans, myself included. I will explain why.

Our small, local CBS affiliate cannot afford translators. Furthermore, they do not have any applications for translators presently before the FCC and do not plan to make application. The following reasons state why:

1. One translator can range anywhere from $24,000 to $36,000 (or even more.) The cost depends on several factors: the height of the tower, the quality and gain of the CATV receiving antennas, construction of a protective weatherproof building, and a telephone interface which would allow routine maintenance checking.

2. Because of the need for electrical power, accessibility, and safety for vandalism, not just any location will do. Private property would be the most desirable, with location near a residence so that the property owners can keep an eye on the translator and notify the local affiliate if something needs attention. This would require some type of lease agreement and monetary arrangement.

3. One translator would not fulfill the needs of this northwest area of Arkansas, since it may have less than a thirty mile radius due to factors such as limit of power allowed by the FCC, weather, and terrain.

4. Microwave relays would also be a viable solution in that the cost to a small affiliate such as ours would be prohibitive, since microwave relay can be as much as doubled or even more over translators and would require more service and maintenance.

5. Finally, and most importantly, even with good, state-of-the-art electronic equipment, there is still no assurance of a consistently good quality picture from a translator. The problem would still exist of signals bouncing off mountains and hillsides, creating a ghosting effect.

A lot of people seem to be doing a lot of talking about low power television stations these days. Obviously, the people who are doing all the talking have never lived in northwest Arkansas and have no understanding of our situation here in the Ozarks. It is an economically depressed area. The county I live in—Searcy—covers 668 square miles, has 13.2 persons per square mile, and has a total population of 8,847. The average per capita income in this county is $5,787, with sixty-one per cent of unrelated individuals falling below the poverty level. As of March, 1986, the unemployment in Searcy County was 10.2 per cent, with our county ranking 71st economically out of 75 counties in the State of Arkansas. We have no urban areas and our largest town, which is also our county seat, only has a population of 1,545 people. Searcy County was one of 150 counties in the United States on the hunger list, which was compiled by a task force from Harvard University. (There are also five other counties in northwest Arkansas on that same list.) As one can see, we have no revenue base and it requires a revenue base to support low power television stations. These stations must have advertising spots and without an adequate revenue base, who would want to invest in such a shaky venture? Therefore, I believe it is safe to state that Searcy County, as well as other surrounding counties, will never have a low power television station. At least, certainly not in the foreseeable future.

Mark Fowler of the FCC stated at the Telecommunications Subcommittee hearings on June 12, 1986 that the FCC has a large number of applications for translators and low signal television stations, which, if processed quickly, would resolve the problem. However, I am sure that if those applications were checked, it would be discovered that the majority of them are for areas that, unlike ours, would: (1) contain large cities with affiliates who can afford the costly installation of translators, or (2) have communities that are financially solid, located near enough industry to provide a substantial revenue base, and can raise the necessary dollars to install a low power television station.

Therefore, keeping in mind that the promise of translators or low power television stations in this area of Arkansas is a negative one, what is going to happen to us when CBS, NBC and ABC finally scramble their signals? Will we be destined to become that small per cent out here who has been forgotten and discriminated against because we are part of rural America? Or will CBS pick up the tab for the translators? Ask them that question. Perhaps the three networks would be willing to devise a multi-system of three translators (one for each network) and cut costs by using one building and tower. What about jointly providing microwave relays? Not only would this ease the burden to their small affiliates, but it would exhibit a real concern for all rural Americans. I maintain these suggestions I have just posed would fall on deaf ears, since the networks would not like to admit what they already know—that the history of low power has not been a good one. In fact, it is a dead expense. They realize that the satellite dish technology is the efficient and streamlined answer to this problem—that it is the new and promising technology of the future. Its upkeep is minimal, its signal is not bothered by terrain, weather or distance, and for people in our situation, it has solved a very real problem. The networks know this . . . why else have they begun to use this amazing technology.

Having done my own informal survey in our area, I can tell you without any hesitation, there are literaly scores of people living in the Ozark Mountains in deep valleys and small pockets of land who receive little or no television signal at all off their VHF antennas. Many of these people have leased, rented or purchased dishes. A large number of them are far from wealthy and many exist on fixed incomes. Among these can be counted the elderly, the invalid, the handicapped who, without their precious dishes, are literally shut off from the world. Because of financial limitations, many of these people will not be able to afford decoders or monthly payments to premium programmers. But they are able to enjoy the advantage of viewing network programming.

The networks state that by law they have the right to protect their signal. In fact, they do a pretty fancy job of either passing the buck or hiding behind this law, using it like a protective cloak, standing their ground firmly in spite of our pleas for consideration. It would seem that reasonable and intelligent people could sit down together and work out this problem; as yet this has not happened, as evidenced by the June 12, 1986 hearings on this subject conducted by the House Telecommunications Subcommittee. In today's ever-advanciang world, when Europe is venturing into the business of direct broadcasting, and when the technology and the needs of the people have increased, that archaic law, so symbolic of the networks' outmoded attitude, must be changed to accommodate rural America.

STATEMENT OF MICHAEL TYLER, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, CSP INTERNATIONAL INC.

Chairman, Members of the Committee, and Staff, I am grateful for the opportunity to contribute through this testimony to the Committee's consideration of the public policy issues concerning home satellite television.

My name is Michael Tyler. I am Chairman and Chief Executive Officer of Communications Studies and Planning International Inc., better known by the short form of its name, CSP International. CSP International is a business consulting and research firm specializing in communications matters. In recent months, the firm has carried out an intensive program of research on the evolution of the market for home satellite television (which I shall refer to as "HSTV" for brevity). This research, completed in July 1986, included intensive, in-depth interviews with over two hundred households which own satellite-television "dishes," otherwise known as television receive-only earth stations or TVROs. Since reactions to the issues affecting HSTV are so often emotional, we believe that the independent perspective and objective data CSP International is able to provide may be of assistance to the Committee.

In order to provide some background, I will take a moment if I may to very briefly review the experience that CSP International brings to this subject.

CSP International combines business, economic and technological expertise, applying these skills to the field of information technology and telecommunications. Over the last ten years, CSP International has been in the forefront of developments in three fields of particular relevance to this testimony: satellite communications; the distribution of television programming (including distribution via satellite, videocassette, cable television and other non-broadcast media); and the evolution of home information and entertainment media. The firm conducts work in these fields in the United States, Europe and Japan. Its first major study of the prospects for home satellite television (or HSTV) was carried out in 1978, long before substantial numbers of home satellite dishes were in use. Since, then, we have carried out numerous research and consulting projects in the HSTV field. This work has included cost analyses, technology assessment studies, financial analyses, market studies, and demand forecasting. It has also involved the preparation of inputs to decisionmaking processes of domestic regulatory bodies (filings in FCC proceedings, for example) and participation in the work of the corresponding international agencies.

It was therefore natural for CSP International to take a close interest in the recent upheavals in the home satellite televison market. It quickly became apparent that emotional reactions to the issues surrounding HSTV has often dominated the debate, while detailed factual data and analyses concerning the complexities of the marketplace, of the technology, and of consumer behavior were generally lacking. In order to fill this gap and to provide an independent and objective perspective on HSTV's future, CSP International carried out the comprehensive study of home satellite televison which I referred to earlier. This study addressed business, technological and public-policy aspects of the subject. It also included an in-depth survey, carried out in early July 1986, of households that already own a satellite "dish."

Before turning to the specific findings of this study and their implications for public policy, I would like to provide some background on the evolution of the HSTV market.

THE EVOLUTION OF HOME SATELLITE TELEVISION

Origins

Between the late 1970s and the end of 1985, direct-to-home satellite televison developed from an experiment into an industry. In 1980, viewing TV programs transmitted by satellite was a rarity. By the middle of 1985, households owning home televison receive-only satellite dishes ("TVROs") exceeded 1 million; by the end of 1985, there were 1.4 million TVRO households in the U.S.

The growth in home TVRO ownership was linked closely to, and greatly assisted by, deregulation. The FCC took the first step in this direction in December 1976, when it relaxed its technical requirements for commercial TRVOs such as those used by cable-TV systems. This step accelerated the development of smaller, lower cost satellite dishes, and led to the widespread introduction of TVROs for home use. In 1979, the FCC eliminated the complex permit and licensing requirements that stood as a formidable barrier to large-scale ownership and use of home TVROs, and in 1980 and 1981 home TVRO ownership began to grow rapidly. By the end of 1981, there were at least 25,000 home TVROs in use. Deregulation cleared the way for the HSTV industry to take shape and grow. The consumer benefitted directly from this, as did equipment manufacturers and distributors. However, for the program service providers there were some complex issues to be resolved. HSTV represented a long-term opportunity for them, but they faced a difficulty of a more immediate kind: some owners of apartment buildings and hotels were using TVROs to receive program service signals free of charge, and were reselling them to tenants or guests. To be fair, it must be noted that some of these Satellite Master Antenna Systems (SMATV) operators did offer to pay for programs on wholesale basis, but many program services did not have the contractual rights to copyrighted material that would have enabled them to enter into such an arrangement at that time.

Scrambling

To protect the proprietary nature of its programming product, in February 1982 Home Box Office announced that it would develop a system to scramble its signal at some time in the future. Between 1982 and 1985 many other program services also announced their intention to scramble their signals.

As members of the Committee will no doubt recall, the issue of scrambling was addressed by Congress in Section 705 of the Cable Communications Policy Act of 1984, which I shall refer to for brevity as the Cable Act. Section 705 of the Cable Act drew a distinction between reception of satellite program signals for commercial viewing and for private viewing. Concerning the latter, it specified that it was lawful for home TVRO owners to view satellite programming not intended originally for their consumption, provided that the transmissions were not encrypted and there was no established "marketing system" under which program services charged fees to authorize viewing. The Act was interpreted by some as the "final word" confirming TVRO owners' rights to view without charge all television programming distributed by satellite. On the other hand, the pay TV program services felt that the legislation left them no other practical choice than to scramble their signals if they wished to prevent unauthorized resale of the signals, and to satisfy the program copyright holders. Pay TV services came under increasing pressure from copyright owners, notably the movie studios, to resolve the issue of unauthorized reception.

In January 1986, Home Box Office and Cinemax both scrambled their signals. In March 1986, superstation WOR-TV scrambled its signal, followed by Showtime and The Movie Channel in May. Turner Broadcasting's Cable News Network and Headline News each began scrambling their signals in July.

The impact of scrambling in the marketplace for home satellite television

The Key question of public policy that emerges from this history is simple to state, but difficult to answer: in the new situation created by scrambling, can we expect market forces to produce an efficient and equitable outcome without legislative intervention? Whether or not an efficient and equitable market can be created depends in turn on the answers to several other, more specific, questions. I propose to begin in what seems to me to be the right place: by considering the consumer. Do households already owning TVRO "dishes," or those considering the purchase of a TVRO, understand the options available to them? Are such households willing to pay for access to scrambled satellite television services?

Given the often heated and contradictory arguments and claims of the different interested parties on the scrambling issue, much of the public is confused as to what the situation really is. Many consumers and dealers seem to have been taken by surprise when full-time scrambling began in January. Though confusion seems to be diminishing, most dealers and consumers are still in the early stages of learning about descrambling technology, the timetable for scrambling by program services that have not yet begun scrambling but intend to, and the various legislative proposals under consideration in Congress.

For example, some consumers with whom we spoke in the course of our survey thought that a separate descrambler "box" would be necessary for each channel to be viewed. Others worried that their investment in a descrambler would become worthless if the industry chose another descrambling standard a few months from now. In fact, of course, neither concern is warranted. All of the major satellite-delivered program services have selected the M/A-COM VideoCipher II as their scrambling system. A single home descrambling unit is sufficient for a household to gain access to all of these scrambled program services, should the household choose to subscribe to all these services. The number of satellite program services that are using M/A-COM's system, or have indicated that they will use it when they begin scrambling, has in effect made M/A-COM's VideoCipher II the de facto industry standard for scrambling.

Other consumers we spoke to in the course of our survey work had the misconception that only movie-based pay TV channels would scramble, leaving ample unscrambled programming to be viewed without charge. Others thought legislators were sure to act to prohibit scrambling and were simply delaying purchase of descramblers until that eventually came to pass, overlooking the fact that none of the legislative proposals before Congress in fact contemplates an unconditional and permanent prohibition of scrambling. In our estimation, these and other misconceptions have contributed greatly to the confusion that is currently inhibiting growth in the TVRO market.

The second barrier to immediate acceptance of HSTV on a subscription basis is the inherent reluctance of some TVRO owners to accept the principle of scrambling. This attitude in many cases seems to rest on the belief that TVRO owners have an "entitlement" to receive pay programming free of charge. Our survey data confirm that significant numbers of TVRO owners are declining to purchase descramblers simply "on principle." However our data also give a strong indication that the proportion of TVRO owners willing to purchase subscription programming will increase rapidly as additional channels are scrambled, and as the range of available subscription programming options, including pay-per-view options, widens. Moreover, a much higher proportion of recent TVRO buyers are willing to purchase descramblers than TVRO owners who purchased their dishes prior to the start of scrambling.

The third barrier to immediate acceptance of HSTV on a subscription basis is the price of the descrambler, at M/A-COM's suggested retail price of $395. I will be discussing in a moment the influence of price on the willingness of TVRO owners to buy descramblers. But suffice it to say here that the future availability of satellite receivers with less expensive, built-in VideoCipher II descrambling capability will have a major, positive effect on the HSTV market. Fortunately. M/A-COM's licensing policies encourage the development of such integrated receivers.

In reviewing these three barriers to wider acceptance of HSTV, I think it is simplistic to argue that scrambling in and of itself was responsible for the sharp fall in TVRO sales in the first quarter of 1986, or that scrambling has depressed the TVRO market permanently. A more reasonable interpretation of the data is that consumer uncertainty and confusion has encouraged a "wait and see" attitude among prospective TVRO buyers. I believe that many potential TVRO owners have deferred making their decision to purchase until what they perceive as uncertainty about scrambling and the future availability of programming is resolved. This view seems to be confirmed by the fact that TVRO sales are now gradually recovering from their very low level (about 45,000 units) in the first quarter of this year, as consumers become better informed and more confident and as the number of subcriptions to scrambled HSTV program services has grown.

THE HOME SATELLITE TV SURVEY

Since we are discussing consumers and the extent to which they are willing to buy descramblers and to accept the concept of paying for satellite-delivered program services, this is an appropriate point at which to review the findings of our survey of TVRO-owning households. We conducted our survey of a representative sample of

203 TVRO-owning households during the first two weeks of July 1986. Some of our key findings are as follows:

Of the TVRO households who had already bought a descrambler and subscribed to program services at the time of our survey (about 1.5% of all TVRO households), the number of subscription channels subscribed to was three per household.

Among the remaining households, 17% (of all TVRO households) had a definite intention to buy a descrambler, 10% were unsure if they would buy, and 72% initially said they would not buy.

Those initially opposed to buying a descrambler gave a variety of reasons. 71% of them thought the price of scrambled program services were too high; 69% of them were simply opposed to the idea of paying for programming; and 63% of them said that the price of descramblers was too high.

Of those households who initially said they would not buy a descrambler, 14% said their decision might be influenced (that is, they would consider buying a descrambler) if Cable News Network (CNN), ESPN, and The Disney Channel were all scrambled; 10% said that having pay-per-view programming available would influence them to consider purchasing a descrambler. (Our survey was carried out immediately before full-time scrambling of CNN began.)

We found that TVRO owners who purchased their satellite dishes since December 1, 1986 are more than twice as likely as other TVRO owners to buy a descrambler and subscribe to a program service. We interpret this to mean that willingness to pay for programming is highest among consumers who do not have a long history of receiving programming without payment.

Based on this data we developed a model to identify the percentage of households likely to buy a descrambler under certain circumstances. We estimate that 47% of existing TVRO households could be expected to buy a descrambler if all the major "basis" program services such as Cable News Network and ESPN were scrambler, and if a diverse range of HSTV services, including pay-per-view services, were available. The corresponding figure for households who got their TVRO more recently than 1st December, 1985 is 64%.

So far, the data I have reviewed are relevant mainly to the question of whether a vigorous market of descramblers and for satellite-delivered HSTV subscription programming can be developed. The answer to this question is clearly yes.

PRECONDITIONS FOR AN EFFICIENT AND EQUITABLE MARKETPLACE FOR HOME SATELLITE TELEVISION

Will this market operate in an efficient and equitable manner? In answering this question, we can usefully break it into two parts. The first part concerns the degree of competition from other television-distribution media that is faced by HSTV as a whole; the second concerns competition within the HSTV market.

Competition to home satellite TV from other media

Our survey shows that subscription HSTV services do indeed face substantial competition from other distribution media providing video entertainment programming. The survey indicated that 62 percent of TVRO-owning households own VCRs (as compared to a national VCR household penetration of 30 percent). One out of every four TVRO-owning households is passed by cable television, and 5 percent of TVRO owners actually subscribe to cable TV in addition to receiving satellite programming.

Looking at the potential HSTV market as a whole, we find that approximately 14 percent of TV households in the US are not passed by cable TV and are not within reach of an MDS (multipoint distribution service) or STV (subscription television) signal. We believe that this segment will comprise the main target market, though by no means the only market, for HSTV. In these households, the main choice for video entertainment will be either HSTV, broadcast television, or VCRs. Videocassette rentals are price-competitive with satellite delivered program channels for anyone whose monthly number of rentals is less than or equal to the national average of six videcassettes per month. For more frequent movie-watchers (such as the typical pay-TV subscriber), the satellite-delivered pay TV service is a better buy. The price comparison between HSTV and VCRs shows that there is intense and well-matched price competition between cassette rentals and satellite-delivered pay TV services in TVRO homes. This price competition can only intensify as cassette rental rates fall: there is a clear and rapid downward trend in rental rates. It is not surprising that in our survey of TVRO homes, 67 percent of the respondents who said they did not intend to buy an HSTV descramber indicated that they would rent videocassettes instead. We are already seeing videocassette prices and rental rates exercising downward pressure on cable TV pricing; it is highly likely that in the future the videocassette rental business will also exert similar pressure on the pricing of HSTV services.

Thus it is clear that subscription HSTV services will be under strong competitive pressure from outside the HSTV market. What conditions within the HSTV industry would ensure an efficient and equitable competitive market?

Other preconditions for an efficient and equitable market mechanism

It is widely recognized that under certain conditions the free working of market forces unfettered by regulatory intervention will achieve the most efficient functioning of an industry in terms of:

Minimizing prices, to the extent compatible with attracting capital into the industry and funding research and development.

Stimulating innovation in the products and services offered.

Providing customers with a wide range of choice in equipment and programming.

For this satisfactory outcome to be achieved, however, there are certain preconditions for the efficient functioning of a market which apply to virtually any market for goods or services. Among the most important of these preconditions are the following:

Awareness of consumers and suppliers about the features and prices of products or services offered by suppliers, and how to acquire them.

A degree of stability and confidence in predicting future events, so that all buyers and sellers in the market are able to plan and make rational decisions.

Market participants who are strongly motivated by competition in decisions such as setting prices and allocating marketing resources.

Low barriers to entry into all sectors of the business, so that if existing vendors set prices higher than needed to attract investment and support innovation, new suppliers will be able to successfully enter the business with lower prices, driving prices down to the minimum level needed to support investment and innovation.

A mechanism allowing for vendors to charge a price for their product or service, and available on the same terms to all vendors.

The last of these preconditions is not a problem where TVROs and related equipment are concerned, but the issue is more complicated when program suppliers need to scramble their signal in order to collect a fee for their products.

In analyzing whether the HSTV industry meets these conditions, I would like to concentrate on three key markets: the markets for TVRO equipment, programming services, and for products and services related to descrambling and scrambling.

Before doing so, however, it is important to have a clear definition of what constitutes equity and efficiency in a market. I have already discussed the criteria for an efficient market. I believe the following criteria for an equitable market, though subjective, are reasonable:

No one should be excluded arbitrarily from access to HSTV services at a fair price.

A fair price is a price constrained by the ability of one competitor to undercut the prices of another if those prices prove to be higher than is necessary to attract capital investment and motivate innovation and risk taking.

I shall now turn to the analysis of the market. First, I will look at the degree to which the TVRO equipment marketplace meets the various preconditions for efficiency and equity that I have just delineated.

The market for equipment

Information is not a significant problem in the market for TVRO equipment since there are many consumer-oriented publications available that provide price/feature comparisons of TVROs and related products. However, a problem does exist in terms of market stability and confidence. The TVRO equipment market has been shaken by the severe reductions in sales that began in December 1985. For the reasons I indicated earlier, I am convinced that this drop in sales was more a result of confusion and uncertainty than an inherent consequence of scrambling. I expect that this confusion and uncertainty will dissipate and that TVRO sales will consequently recover, as the HSTV marketing activities of the program service suppliers develop, as acceptance by TVRO owners of HSTV subscription services becomes clear, and as uncertainties about legislative intentions are resolved.

Competition among TVRO manufacturers, distributors, and dealers had been strong and is likely to remain so. The proliferation of very small TVRO manufacturers and makers of subsystems for this market testifies to the remarkably low barriers to entry in the industry. More than 25 manufacturers and assemblers of TVRO systems exist in the current market, offering TVRO configurations of varying capabilities ranging in price from under $1,000 to tens of thousands of dollars. Competition can be expected to increase still further as major consumer electronics manufacturers in the U.S. and Japan enter the market.

In addition, the geographic spread of TVRO dealers throughout the country points to an equitable TVRO equipment market. Strong competitive pressures are keeping each player's profit margin down to the minimum level required to keep investors committed to the business. Thus, it seems likely that TVRO purchasers have available to them the best deal feasible in light of present day technology and the present-day volume of sales.

Our conclusion is that the equipment market is functioning in an efficient and equitable manner. This judgment does not, however, overlook the need to increase sales volume and thus realize the economies of scale and scope that can be achieved by large-scale production and rapidly accumulating production experience.

The market for subscription programming

Turning to the second part of my analysis, dealing with conditions in the market for HSTV subscription programming, I shall again refer to the five criteria for an efficient market; informed buyers and sellers, stability and confidence, competitive behavior by market participants, low barriers to entry, and a mechanism for pricing that is available to all vendors on equal terms. Information on the available scheduled program services is easily obtainable through the many program guides serving TVRO owners. Consumer understanding of how to access scrambled services remains a problem, however. Nevertheless, a significant number of HSTV subscriptions are being sold.

Authorizations of M/A-COM descramblers are a good indication of this: The total stands at over 23,000. This total is growing rapidly at just over 2,300 per week, and this weekly volume itself is rapidly increasing. Correspondingly, TVRO sales have begun to grow once more. Despite this and the marketing efforts of M/A-COM and the HSTV program-service providers it is clear that still more needs to be done in the field of consumer information: the HSTV program service market needs consumers to perceive a higher degree of stability and confidence than they do at present.

How competitive is the market for HSTV subscription services? Though the market is still in its early evolutionary phase, it is already apparent that highly competitive behavior among market participants is emerging. When Viacom followed Home Box Office into the HSTV market, it set substantially lower prices. The price offered by SelecTV are expected to be lower still, and the pricing of videocassette rentals relative to HSTV subscription rates continues to be a further source of downward competitive pressure on pricing.

It is true that there are substantial barriers to entry facing any company coming from outside the program service business and seeking to enter it. The fixed cost of creating a national brand awareness of the kind existing for Home Box Office or Cable News Network is substantial. Costs are also high to set up financial and operational systems and to gain expertise in program scheduling and acquisition. However, this does not mean that there will be no new entrants into the HSTV program business. Program providers not involved heavily in the provision of programming to the cable TV industry, such as selecTV, will have a high degree of incentive to seek market share aggressively in the HSTV market. In addition, there are opportunities for vertical integration among industry participants "upstream" and "downstream" from existing program suppliers in the distribution chain. If prospective "retailers" of HSTV programming such as the National Rural Electric Cooperative Association or Viewers' First National Inc. (VFN) are dissatisfied with the policies of the pay-TV programming services, they have the option of seeking a direct relationship with the primary sources of programming, such as movie studios. Similarly, if copyright owners such as movie studios feel that the margins earned by the program services are excessive, they have the option of dealing directly with the "retailers" and developing modes of program distribution via satellite themselves, bypassing the established program service providers.

These diverse sources of competitive pressure will, in my view, ensure that the market for subscription HSTV program services functions in a highly competitive manner. But will the market for program services function fairly and equitably? Since this market is subject to strong competitive forces, it is unlikely that profit margins of program services could remain exceptionally high (if they ever become exceptionally high) without the high-margin companies rapidly losing market share. In assessing fairness it is important to ask whether pricing of HSTV services higher than the price charged to a cable TV subscriber (if HSTV pricing in future does indeed prove to be higher) is fair to the TVRO owners. Prices charged by local cable TV operators vary widely even in the same geographic area. In the case of either cable TV or HSTV, the prices charged depend upon the cost of providing the service as well as the cost of marketing the service to targeted customers—costs that could vary widely according to the density of the geographic market and the marketing strategy being followed. We believe, therefore, that an attempt to compare cable TV and HSTV prices is not especially relevant as a way to test whether the market is operating equitably. More important is the opportunity for competitors who believe that an HSTV subscription price is too high in relation to costs in a specific market to enter the market with an alternative.

Service to TVRO owners in remote areas

A second question regarding fairness is whether TVRO owners in remote areas will be able to assemble an adequate "bundle" of television channels at a cost that is reasonable relative to the cost of assembling a similar "bundle" in an urban area. A key factor in this is the availability of videocassettes. As noted earlier, 62% of TVRO owners, a percentage that is more than double the national average, own VCRs. Moreover, a price comparison based on the number of pay TV or videocassette movies that a typical household watches each month shows that the need for movies is met by HSTV and VCRs with broadly the same degree of cost/effectivness. HSTV has the advantage of convenience and instant availability, while cassettee rental is ahead in terms of the range of choice of programming that is offered. The broad price parity between videocassette rentals and HSTV program services is an important safeguard as regards fair pricing of HSTV. Suppliers of HSTV services cannot discriminate in pricing between customers who have easy access to the alternative of videocassette rental, and those who do not. Competition from videocassette rental for the dollars of households that do have VCRs and easy access to cassette rentals will also hold time rates for HSTV program services for those households who lack one or both of these conveniences. Consequently we are confident that, as the market develops, HSTV pricing will be such that the minority of rural TVRO households that do not have VCRs will not be significantly disadvantaged.

Overall, our judgment is that the emerging program services market for HSTV will be highly competitive, and certainly competitive enough to ensure that consumers have a wide choice of programming and pay the lowest feasible prices consistent with high levels of innovation and investment in the industry. The effect of competition will be to safeguard the provision of HSTV service on a fair and equitable basis to all TVRO households, including those located in remote rural areas.

The scrambling system: is it workable, efficient and equitable

The third and final part of my discussion of the home satellite television (HSTV) industry will deal with the extent to which the emerging system for HSTV scrambling is workable, economic, and equitable; the key issues being whether program services have equitable access to the scrambling system, and the degree to which descramblers are affordable, reliable and available to consumers.

In the past the competition between Oak Industries, M/A-COM, and Scientific Atlanta over their rival designs for scrambling has led to a perception that scrambling is a very complex subject. However, with the widespread acceptance of the M/A-COM VideoCipher II as the de facto industry standard for HSTV, program service providers and equipment manufacturers feel that the scrambling situation is stable and have confidence in the future of its technology. Unfortunately, the perception of confidence and stability in this market has yet to consistently find its way into the minds of a majority of TVRO dealers, owners, and prospective buyers, though we believe the situation is improving. Equipment manufacturers and program services are making major efforts in advertising and consumer information, but more remains to be done.

In order to make an independent assessment of the distribution and availability of VideoCipher descramblers, CSP conducted random telephone interviews with 35 TVRO dealers across the US. We discussed price, availability, and reliability of the descrambled units with the dealers. We found that while virtually all dealers handling this product had varying degrees of difficulty obtaining units around the time scrambling began on January 15 of this year, not a single dealer cited problems in obtain descrambled units currently. Over half of the dealers we talked to did not themselves stock the descrambled, but ordered them from distributors as consumers requested them. These dealers indicated that units were available in two to three days from distributors. Only 10% of the dealers interviewed said that they did not handle VideoCipher II, stating that they were "waiting for the market to develop."

No reliability problems with the VideoCipher units were reported.

Overall, our conclusion is that the availability and reliability of descramblers is not significant constraint on the development of the market.

It is important to consider the degree to which price of the VideoCipher II at its recommended retail price if $393 is significant impediment to the development of markets for HSTV program services and to the recovery of TVRO equipment sales. Our TVRO household survey showed that the price was one reason that some households would not buy a descrambled, but that the price of descramblers was only the forth most frequently-cited reason. As I mentioned earlier, the more frequently rationales for not buying descramblers were the prices of descrambled services, the availability of numerous unscrambled channels, and opposition to the principle of paying for programming.

It seems doubtful whether large price reductions on stand-alone VideoCipher II descrambler units are likely in the short term, due to M/A-COM's need to recoup nearly $40 million in research and development expenditure on the VideoCipher system. But the introduction of TVRO receivers with built-in descrambling capacity, which is offered by M/A-COM at a much lower price, will reduce the price barrier to market acceptance of descramblers.

In order to assess the policy implications of the way the scrambling equipment market works, I and my associates took a look at the impact of M/A-COM's proprietary control of the scrambling system.

The approach M/A-COM has taken, establishing a single scrambling standard for program services and ensuring that the TVRO owner need buy only one descrambler "box," is essential to stimulate competition among program services. However, it put the originator of the technology in a somewhat monopolistic position. Much therefore depends on how the originator deals with this situation. M/A-COM has chosen to facilitate the devleopment of the market, rather than exploiting its proprietary position as regards the scrambling technology, in two ways. It has licensed its technology to other vendors for incorporation into one-piece receivers/descramblers. It also offers stand-alone VideoCipher units to manufacturers or authorized distributors wishing to sell descramblers on a "private label" basis, that is, under their own brand name.

M/A-COM has also established a policy of equal and open access to its DBS Authorization Center, through which each satellite program service can switch on or off each HSTV subscriber's access to that service's channel or channels. This process is referred to as "authorization" and "de-authorization." The DBS Authorization Center, a M/A-COM subsidiary, is open to all program service providers on equal terms (including equal fee rates) and offers the same "basic" services to all on a nonprofit basis.

CSP International's conclusion is that given these policies, M/A-COM's role as a proprietary owner of the technology used in the industrywide scrambling system does not have an adverse effect on competitive conditions in the HSTV marketplace.

LEGISLATION, REGULATION AND THE DEVELOPMENT OF THE HOME SATELLITE TELEVISION MARKET

This assessment of market conditions in the three HSTV markets (the markets for TVRO equipment, program services, and descrambling) leads me to believe that the operation of market forces will in fact produce an efficient and equitable outcome, without a need for legislative intervention. Before concluding, I would like to address briefly the issues raised by a variety of legislative proposals currently under consideration. Rather than addressing the details of specific bills, I would like to discuss three key elements, one or more of which can be found in most individual bills: a moratorium on scrambling, FCC regulation of the HSTV market, and legislatively mandated preconditions for scrambling.

First, I would like to comment on the detrimental impact that an all-out freeze on scrambling would have on the HSTV industry. I believe that a moratorium on scrambling would not revive TVRO equipment sales. In fact, a freeze could reopen the issue of technical standards for descrambling, compounding the uncertainties facing prospective buyers of TVRO earth stations, and deterring TVRO buyers from purchasing equipment today that they think might be incompatible with future scrambling systems. Moreover, it is unclear what information Congress would then have in several years' time to illuminate policy decisions on scrambling and industry structure that it does not now have.

Second, I would like to highlight the fact that the unregulated marketplace has already that were sought in some draft legislation. For instance, descramblers are readily available to consumers, the available descramblers are able to descramble all popular scrambled program services, and descramblers are reasonably priced in relation to the costs of introducing a secure descrambler with 1986 technology.

Third, I would like to offer some observations regarding proposals which envision regulating the pricing of HSTV program services so as not to exceed cable TV pricing for the same service. One problem is procedureal. The increasing diversity of price levels and complex tier structures in cable TV pricing, in an industry which is moving towards deregulation in practice to administer a policy of limiting HSTV service pricing to levels not exceeding those of cable TV service.

Another problem is one of principle. I do not believe there is any "a priori" reason why it would be inefficient or inequitable for HSTV service prices to be higher than cable-TV operators' prices for similar services. In a competitive market, pricing depends on the costs, risks and profit margins arising within a competitive market. The following examples (by no means an exhaustive list) illustrate my point. The advertising and marketing costs for a program service in the relatively compact cable TV franchise areas will differ from those for the extensive, low-density noncabled areas serving the HSTV market. Business risks vary between cable TV and HSTV, In that the economics of the cable business are well understood, while HSTV is a new business with intrinsic higher risks; thus, somewhat higher margins and rates of return are appropriate for HSTV.

My last set of comments on legislative and regulatory concerns the concept of FCC regulation of the HSTV market, as proposed by several pieces of legislation under consideration in both Houses of Congress. Mandating this kind of regulatory activity by the FCC would run counter to the deregulatory direction taken by the Commission itself over the past several years as a result of extensive economic, technical, and legal analysis in a long series of regulatory proceedings. It would also disregard the role which deregulation by the FCC played in launching a large-scale TVRO market for the first time in the early 1980s.

Should FCC regulation of HSTV pricing nevertheless remain under serious consideration, there are several difficulties that must be addressed. One difficulty, already mentioned, is the impracticality of strictly comparing HSTV rates with cable TV rates, especially in view of the phased partial deregulation of cable pricing from the Cable Act of 1984. Another difficulty would occur if the FCC based allowable HSTV prices on a method similar to the rate-base regulation used for telephone rates. In rate-basing regulation, prices are calculated from an allowable rate of return on capital employed. I believe that it would be extremely difficult to determine which capital and operating costs would be attributable to HSTV services, since these are in effect a "joint product" produced and distributed simultaneously with cable-TV program service. Moreover, if involvement in HSTV service would subject entire businesses to detailed public scrutiny within FCC proceedings, I think it is possible that new program services could be deterred from entering the HSTV market, and the need to submit detailed economic studies and the high costs of legal representation could well be perceived as a further barrier to participation in the HSTV market. Increased barriers to entry could only harm, rather than help, the HSTV consumer.

I would like to conclude my remarks by summarizing the most important conclusions that I and my associates have derived from our recent studies of the HSTV industry:

(1) As uncertainties and misconceptions about scrambling subside, the level of sales of TVROs will increase, even in a new environment in which satellite dish owners have to pay on a subscription basis for many kinds of programming.

(2) Though confusion among TVRO owners and dealers about scrambling and HSTV subscription is lessening somewhat, there remains an urgent need for an expanded public information effort.

(3) Assuming that this is done, and present uncertainties about public policy for HSTV are settled by the end of 1986, our projection is that the total installed base of TVROs will grow from about 1.5 million today to between 2.6 million and 3 million by the end of 1988.

STATEMENT OF ROBIN ADAIR

Mr. Donal C. Latham, Assistant Secretary for Communications, U.S. Department of Defense, told those in attendance during the second panel's presentation to the House of Representatives Subcommittee on Telecommunications during the June 6, 1986 hearings, ". . . as you deliberate the fate of backyard satellite TV systems." And Representative Thomas J. Tauke repeated a statement he attributed to Mark Fowler, Chairman of the FCC, saying, "I told you I was sick." How right both individuals were and are, will be underscored by our contributions.

Those in Washington who read this, will be getting paid for their time. This material was prepared by a number of concerned Americans. None of us have been nor will be paid a single penny. To the contrary, all of us have spent money on copying, telephone bills, travel, postage and numerous other expenditures. Plus our most important resources, our intellectual effort and our time.

Why have we made this effort a priority? Why use our limited resources to collect and present our opinions and supporting evidence? This commitment comes not from a desire for profit nor for fame, but from a deeper and even stronger source, our faith in and commitment to our democratic process and the belief that there are those in Washington who still respect and value our views.

Some have claimed our congress persons are mainly influenced by the number of and the size of Political Action Committee, PAC contributions, by political favors, and by other less noble reasons. We are placing our faith, evidenced by this tangible result of our efforts, in those members of Congress who truly try to represent their constituents and all other Americans who are effected by their decisions and actions.

No form letter, nor phone call, nor reference to this material will make it more valuable than the paper it's written on. Americans place great faith in paper(s). Especially those with printing on them such as our paper money, our important religious works, our Constitution and hopefully this document, which consist of many pages, but represents one effort, one concern and one hope!

Congressmen and women, Representatives and Senators alike, you serve as our elected representatives and we urge you to weigh carefully the information furnished by federal agencies and spokespersons for them, that offered by those representing groups/organizations, that submitted by large corporate interest, and most importantly that whisper which is growing into a shout from citizens (voters), don't sell our first amendment right, our right to free speech to the highest bidder, don't give it away, protect and nourish it.

No we will not, ". . . put a tombstone on this whole industry while we study it to death". Mr. Billy Tauzin said this was an issue that was of concern to everyone! He also pointed out, "Congress has protected the cable company from it's most competent competitor in that area. That competitor being the other wire, the telephone company. We have stated in law, that the local telephone company cannot be a provider of video services. In effect the government prevented competition between the other wire and the cable company." Congress and the President came to Chrysler Corporation's rescue with Money, that's something the satellite telecommunications industry is not seeking! In fact we will rescue ourselves at no cost to the taxpayer if Congress will only send equitable legislation to the White House for the President's signature.

We don't want money. We don't want protection. We don't want you to solve our problems for us! We do want and need access to programming which is currently controlled by vertically integrated corporations whose size alone makes them giants who look like monopolies! Yes, let the marketplace work. I can use my oven without the government's help as long as electricity/gas is available. Satellite manufacturers, distributors, and dealers can remain in business as long as purchasers of satellite receiving equipment have access to programming at reasonable cost! Dr. William A. Ternent expressed this issue so clearly when he stated, "We find the issues of (1) accessibility of signals to consumers, (2) the development of competitive marketplace for signals to consumers, and (3) the availability to redistributors of satellite distributed programming intended for consumption by the national general public audience, to be inseparable."

Lengthly documents usually receive the least attention, so I'll keep this short. At least short in comparison to the size and strength of the forces who oppose broadening our right of free speech and access to information. Oh, they point out they helped broaden citizen's access to news, information and entertainment while they raise one lilly white shirtsleeved arm, carefully hiding the other arm behind their back with the smoking weapon still clutched tightly in their hand. Yes, Congress and the President enacted and passed legislation that helped thousands even millions of people obtain access to news, weather, sports, and educational information. Congress and the President also protected this new technology, television carried by wire, from competition. Now, instead of a productive bean plant that furnishes nourishing food, we have a beanstalk that on one hand is choking the life out of a new competing industry and on the other is in the clouds with the gods; whispering in their ears saying, "don't worry everything is all right, things are fine, don't rock our boat".

Following the March 6, 1986 Telecommunication Subcommittee hearings I took the time to identify the problems and set them down in writing. I also carefully considered what solution(s) would best serve citizens and the satellite industry. I enumerated twelve problems and named what seemed like the best solution(s). On July 4th our Independence day, I reviewed those problems and the proposed solution(s). Some four months had passed and the same twelve problems not only remained, but several had worsened. One may have improved. This information is attached. I urge you to carefully review it and decide for yourself if the market is working! Remember the saying, hind sight is easier than foresight. Well, I can't claim foresight since the problems were not only visible to those who took the time to look but many other expressed them more clearly than I.

Mr. Billy Tauzin appeared on a radio talk show as a guest and at the end of the program he asked the host/listeners to draw up a concise list of the problems and send it to him. Not surprisingly my "list" had already been addressed and sent to his office. Our Congress nor our Administration can afford to clap their arms over their ears and hands over their eyes and say, "things are fine, well maybe they're not, let's investigate—let's have another hearing". Mr. President, Mr., Mrs., Ms. Senator and/or Representative the information is at your finger tips, and the industry is shouting "Help". The Honorable Thomas J. Tauke reminded FCC Commissioner Mark Fowler of a story he (Mr. Flower) has told about visiting a grave site where the tombstone had only six words on it. On it was carved, "I Told You I Was Sick."

Well, we've told you the satellite industry is sick no it's about to change to "was"! Honorable Al Swift eloquently stated, "But come of the actions by some in pursuit of those legitimate concerns, and I would cite HBO and CBS in particular, seem to be pre-emptive. They seem to be aimed at trying to put in place, a process that will for ever give that new technology fits in the marketplace and to do so before Congress or the rest of the market has the opportunity to work things out so there can be fair competition. The dish industry has been put at risk. And it's the smallest of those entrepreneurs out there trying to sell dishes to people that are put at the most risk".

The 99th Congress has sought answers, if two and soon three hearings are an indication answers are desired. The Administration says, "It is generally working fairly well" and "I think we would all recognize that marketplace failure when it occurred."

The following information is offered as evidence to substantiate what Congress should have heard and now know and to educate the Administration who has either been listening to the wrong station or is just, "one of the stations." I have (on the following pages) addressed three major points; (1) The marketplace is not working, (2) Certain interest, control the telecommunications industry and stand to benefit from the poor health/death of the home satellite market, (3) Evidence that helps documents either of the above but additionally demonstrates or illuminates the problems beyond both point 1 & 2 above.

Before you try to study the details, try this example of the MURPHY principle as a brain teaser! You own a satellite system and have either purchased, are leasing, or renting a M/A-COM Videocipher II, VC II, and it stops working. You had subscribed to/for a basic package of CNN, CNN Headline News, WTBS, and Showtime. You or your dealer had to call the number for the package and another number for Showtime. Now your decorder is not working. If a spare is available (for free/rental) you still have to call one number (for the package) and explain why YOUR decorder must be deauthorized and another authorized and again you have to do the same thing for Showtime. Of course if a spare VC II was unavilable etc., then you would either have to pray the VC II was repaired within 2-3 days and back in your home operating (not worrying about your subscription being used up without benefit to you), or you would have to still make two calls hopping the authorization centers would extend your subscriptions and then you would have to call back to get your (original) VC II reauthorized. Of course, if you used the spare, you would still have to make two calls to deauthorize the spare and reauthorize yours. That's complicated even if you only have just one number to call for everything! Anyway, you can always count on the Murphy principle. The question is can you count on your decorder and the subscription service(s)?

Proof the market place is not working:

1. Three nationwide finance/loan companies have discontinued authorizing loans to those who wish to purchase satellite receiving systems.
2. Dealers and distributors continue to close their businesses with many being forced to file bankruptcy. Millie Fontenot, of Satellite Earth Stations East testified their business was down by 66⅔%. The closest distributor, Starpath Systems has been forced to close three of the four outlets, which were providing employment and revenue in two other states in addition to Kentucky!

3. As recently as July 14 & 15, 1986 advertising has remained inaccurate and/or deceptive. i.e., stealing signals, one decorder decodes everything. . . .

4. I've written a number of programmers and/or programming distributors inquiring about my marketing programming in the future (since area dealers are not interested and area cable companies state they don't wish to be involved). Yet not a single programmer/distributor has answered my letters nor returned my phone calls.

5. The Public Broadcasting Service is saying they must encrypt their signals also and they too have not answered my letters.

6. C-Span has not answered my letter inquiring about programming/access either.

7. The Justice Department has had ample time to investigate and either initiate action or announce there is no basis for action, yet they remain silent. Some finding is needed now, not when it's safe because Congress has adjourned and/or the elections have been held.

8. Sales, installation and service of the M/A-COM VC II have not mushroomed as an accepted "industry standard" would when offered at a reasonable price and that is compatible with the majority of conditions and systems.

9. Those satellite dealers who wish to stock, or for that matter even if they only want to purchase the M/A-COM VC IIs. The normal wholesale distributor price of $360–365 is only $30 less than the advertised retail price which destroys all possibility of price discounting and unless the dealer charges extra for connecting the VC II the profit does not pay the dealer's cost!

10. Mr. Mark Fowler, Chairman of the FCC stated, "They have an ability to cut the cost in effect $175 because they said on or about the first of June they would have a module that it would be possible to simply plug in to a satellite receiver and then you would be able to use that as the decoding instrument." June first and July first has come and gone, yet no word from M/A-COM! How will a dealer answer a consumer who bought a VC II for $395 when nationwide publicity states they are available as either a stand alone or a builtin unit for half the price they paid! No, the M/A-COM VC II is not the industry standard!

11. Even M/A-COM acknowledges of those satellite receiving systems which are compatible with the VC II there are other variables such as signal strength and/or possible terrestial interference that make the VC II useless. Add to this the fact that many existing satellite receivers like those I own, must be modified before they will work with the VC II (assuming good signal strength and little/no terrestial interference, TI). These problems preclude any present or future healthy/working marketplace for the VC II.

Certain interests control the telecommunications industry and stand to benefit from the poor health/death of the home satellite market.

1. Only seventy miles away a major MSO is not only marketing M/A-COM VC IIs (at prices below what dealers can purchase them for), but additionally they are selling satellite receiving systems and soon will be leasing them in addition to programming packages.

2. A major cable equipment distributor is now marketing one specific program (service) and M/A-COM VC IIs and using misleading if not deceptive advertising in satellite program guides and trade publications.

3. Only a few major cable companies are participating in the marketing and providing of programs (subscription service) and programming packages, yet all cable operators are receiving a rebate from the programmers for anyone who subscribes directly through the programmer and who is located in a cable franchise area. Mr. Brian Lamb wrote Mr. Wirth a letter which was read.[1]

4. According to industry/trade publications (which include quotes) HBO and Showtime have chosen not to negotiate/bargain with the NRECA in it's effort to enter the satellite telecommunications hardware and software market.

5. Common carriers remain in violation of laws/rule/regulations and not even the Register of Copyrights nor the FCC have challenged/prosecuted them under existing laws. These violations have been the subject(s) of formal complaints and even discussed in print, so it's common knowledge (that they are taking place and who is engaging in the activities).

6. United Video, a common carrier, who uplinks WPIX-New York, WGN-Chicago, and KTVT-Dallas (all superstations) has mailed flyers around the country offering a subscription package of these (and other?) services even though existing law prohib-

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[1] At the beginning of the Hearings, saying C-Span would not encrypt. TCI knows they will. If only 500,000 of the 1.5 million TVRO system owners subscribe TCI would receive $9,000,000 a year with costs being limited to paperwork! We citizens pay for the equipment, operators etc. already! Just more fat cats!

its common carriers selling such subscriptions to individuals. Since there is legislation pending that would make the encryption of these signals legal and the marketing of the encrypted signals to home satellite system owners all legal, United Video must know the legislation will be passed or they would not have spent thousands of dollars or creating, producing and distributing this package offer!

7. Based on reports filed which disclose politician's income from political contributions, specifically those from political action committees (PACs) millions if not BILLIONS of dollars are donated by groups such as the National Association of Broadcasters, NAB, Community Antenna Television Association, CATA, and the National Cable Television Association, NCTA. This last group alone, in 1985 disbursed (PAID) $43,443 to politicians and/or political groups. Not surprisingly many recipients of these contributions are chairpersons of or at least members of both House and Senate committees that are charged with responsibility to consider legislation that might be beneficial to these special interest groups or adverse to their perceived best interest. There's where the problem lies, and voters and politicians alike should know and understand the "rules of the game".

8. Religious program sources have been urged, "FORCED" to encrypt their programs even though it's against their best interest! They can't afford to risk losing a potential market audience of 40 million plus, if they don't do what the powerful cable interest dictate!

Evidence which helps document either of the preceeding points but that additionally demonstrates or illuminates the problems beyond points 1 & 2.

1. As of July, 1986 there is a lawsuit pending against HBO, Paramount Studios, and Universal Studios seeking immediate injunctive relief under the Sherman Anti-Trust Act.

2. As of July, 1986 there is at least one (additional suits reported) lawsuit pending against M/A-COM the manufacturer of the VC-II alleging possible unlicensed use of proprietary information/technology and/or violation of patent laws by one or more plaintiffs.

3. The movie/entertainment programming/distribution industry is so powerful, the American Armed Forces Radio and Television Service, AFRTS, has been forced to surrender rather than risk losing access to and distribution rights for programming which is being supplied via satellite to our overseas military personnel. Now AFRTS states in writing they must encrypt or scramble their satellite signals, yet at the same time the radio program transmissions made both by AFRTS and the Voice of America, VOA, are also protected under provisions of US copyright laws, which provide the basis for the justification for encryption of the video/television services. The copyrighted radio programming would have to be encrypted, but neither AFRTS nor VOA have announced being forced to scramble their radio signals!

4. Ted Turner, an independent broadcaster is so big and so powerful, he can inspire, develop, and market the GOODWILL GAMES held jointly between Russia and the United States. He has been able to unite and use Russian telecommunication facilities, international telecommunications facilities and his own vast telecommunication facilities all together so that these "games" can be marketed worldwide. He has managed to encrypt his very popular news program(s) CNN and CNN Headline news, thus effectively removing access to these services from in excess of one million households while offering to major European countries television audiences for free! I suspect much of the American advertising of American products remains in the signal(s) marketed in Europe where the products probably are not available. Conversely, the products are available in this country but the advertising for those products is not accessible to the extent the ads are run on the scrambled services.

5. Either the Federal Communication Commission, FCC, is "playing dumb", or one or more FCC employees are inept. Mr. Smith, FCC Field Operation Bureau Chief answered Honorable Michael Oxley's question about a portion of a FUN Channel transmission being superimposed (shown at the same time) on a Disney channel satellite distributed program by saying "We think it was one of several cases of inadvertent interference that occurs during the operation of the many earth stations. Many of those operations because of misdirection of the antenna or misadjustment of equipment for very brief time. These incidents of very short duration are very difficult to run down. For 90 seconds it's very very difficult to investigate and determine the source and exact nature of them."

Fact.—The FCC must know the FUN Channel's adult programming is scrambled not part of the time, but FULL TIME from when the movie/show starts till when it ends. FACT—The satellite the FUN Channel is uplinked to a satellite which is not one, not even two, but THREE satellites away from the satellite which carries the Disney Channel programming. Sure, the teleport may have aimed the antenna at the wrong satellite, BUT to believe someone "accidently" failed to or intentionally did not scramble the normally encrypted program stretches one's imagination more than the 22,300 miles distance that separates earth from the satellites! Now to think someone accidently aimed the antenna at the wrong satellite and decoded then retransmitted the clear FUN Channel program stretches the mathematical probabilities beyond our human comprehension! So this "incident" must not have been an accident.

6. Possibly the most clear fallacy is that put forth by both networks and their affiliates. They claim after 10–20 years of broadcasting signals which are advertiser supported via transmitting facilities licensed under the FCC and purportedly to be done in the "public interest" that now they are concerned about their network/affiliate signals not reaching some portion of this country's population, which they claim is very small i.e. 2%?.

The FCC assigns radio and television station transmitting locations and approves the station's proposed transmitter output power based on carefully calculated signal coverage (distance from each station) and possible interference with a signal of another station transmitting on the same or even adjacent frequencies. Commercial stations are just that, a business. As a business they started business based on carefully researched statistical facts including but not limited to potential viewer/listener population (in various age ranges), family/individual spendable income, type of business, industrial, etc. economy in the stations signal area, the amount of network and/or independent competition, potential for growth/expansion, etc. In nearly every instance, this was done before the business even applied for the license to transmit let alone started building the facility.

Sure we now have ex-ended metropolitan areas and yes, there are more of us living in the rural areas, but this economic and demographic change(s) has not significantly altered the listener/viewer base enough to justify (financially) the costly application process, the purchase and installation of equipment and the various and sundry other cost of translators being used to extent network/affiliate station programming coverage. There remains no financial incentive for television/radio stations making the sizeable investment necessary, except in rare instances in which case the application for a translator(s) has already been made. In those isolated instances one can still ask why now? And more importantly what about the many other gray and white areas. CBS has not even been courteous enough to answer my letter in which I asked about my not being able to obtain adequate signal(s) from their two closest affiliates Nashville and Louisville. Mr. Tom Rogers', Counsel for the Tele. Comm. Subcom., suggestion regarding a solution to the must carry rule problem is mention in my letter.

CONCLUSION

We citizens have tried to do our part, we've written letters, we've called every Representative and every Senator at least twice, talk about understatements! The general public, those who receive over-the-air and/or cable television signals, along with many members of Congress (or so it would seem) do not recognize the real issue. Our right to free speech and unrestricted access to information, news, entertainment, education, etc. By unrestricted access, we do not speak of everything for free, we speak about being able to with equal ease, without greater expense, without discrimination being able to receive anything other citizens can receive regardless of whether it is via a signal transmited on radio and/or television frequencies, whether over a cable system wire, and/or via satellite. Explain this please—There are more pieces of legislation pending in Congress relating to telecommunications than any other subject. Except for bad press, the subject can not be found anywhere in the media. Another white area.

The Honorable Billy J. Tauzin said, "Whether we are going to put a tombstone on this whole industry while we study it to death!" Congress helped cable, they helped Chrysler Corporation, and inumerable others. Sometimes only legislation was forthcoming. Other times legislation produced or made available large amounts of money. The home earth station industry is made up of hard working men and yes even women. People who could be called pioneers in this new technology. Some if not many will lose interest, find quick profits elsewhere, lose their business and some even their homes in their struggle to make a living in a very competitive industry. Still there will be some who study and learn, who do not give up, who are resourceful and who value the good faith of their customers above all else. These are the ones who with Congress' and the President's help deserve only a fair chance in their attempt to compete with large vertically integrated corporations. They do not ask for money, they ask for freedom. Freedom from programmers and programming distributors refusing to allow them to package and/or market their products.

Freedom from indusries forcing the AFRTS, the Christian Broadcast Network, CBN, the Public Broadcast Network, PBS and others to against their philosophical and financial best interest hide their signals so one and only one select technology can uncover it, when this very technology further restricts access to and use of satellite technology and programming! This select magical box does not work with up to 30% of the existing systems. It does not work with another 5-15% of the systems where the received signal is not strong enough. Nor will it work with another 3-10% of the systems where even small amounts of terrestrial interference exist. Plus it diminishes the added flexibility block receiving systems offer. Finally if you want and can afford two decoders so two different encrypted programs can be enjoyed using a block system and two receivers, the customer would have to pay for two duplicate packages of subscriptions so both decoders could be used on each/any of the authorized services!

Mr. Tauzin questioned Mr. Donald Wear, CBS Senior Vice President saying, "You don't actually charge Mr. Jones for receiving your network programming. You actually pay him to take it and rebroadcast it. Is that correct?" Mr. Wear's reply was, "Yes, sir." Mr. Tauzin continued, "Ah, well, if you won't let folks who live out in the hinterlands of America see your programming free of charge. Would you be willing to pay them to look at it?"

Many of us will gladly pay a reasonable price for unrestricted access to programming of our choice! That's why we purchased satellite systems, not so we could get something for free. Translator repeated nor cable delivered signals will never be available here, but satellite delivered signals are now. All of us who spent (invested) hard earned money so we would have access to those signals don't want to pay for advertiser supported programs any more than the person who watches them using their TV and an antenna. Nor do we want to pay more for those signals than subscribers to cable pay. Actually we should pay less since the cable company has no overhead, we bought and maintain our own "cable system"! Don't let corporate America or anyone's lack of awareness and/or concern errode, etch, nor efface our right to freedom of speech and the press, granted to us by the First Amendment under our Constitution.

JULY 28, 1986.

Hon. STEVEN SYMMS,
509 Hart Building,
Washington, DC.

DEAR MR. SYMMS: Once again I feel obligated to pass along some pertinent information about certain practices in the satellite and cable industies.

On the 26th of July, I received a dealer programming offer from Ampac Communications. I have enclosed copies of this offer so you can see for yourself how home satellite dish owners are again being discriminated against. In my opinion, if these programming prices are available for apartment and condominium resale then these same prices should be available for single family dewelling also! Unfortunately, as I am sure you are well aware they are not. Also, after reviewing these price lists it is obvious that the prices for programming for premium channels such as HBO - $12.95 per month, Cinemax - $12.95 per month, Showtime - $10.95 per month, CNN - $25.00 per year, etc, are greatly inflated. I hope this information will be of use to you in deciding what action should be taken to rectify the current programming disputes.

Thank you.

DENNIS V. DECKER.

Schedule I.—Hotel/motel/hospitals

Showtime/the movie channel:	
0 to 499 rooms (per room per month)	$3.70
500 plus rooms (per room per month	3.50
ESPN	0.25
CNN	0.35
WGN	0.15
WTBS	0.15
Nashville	0.30
CBN	free

USA	0.20

Other rates available upon request.

Notes.—(1) Payments must be made monthly in advance. (2) All rates based upon total number of rooms. (3) Contractual period for premium 5 years, all others 3 years.

DEALER PROGRAM SMATV MARKET

AMPAC Communications offers the opportunity to purchase premium programming without having to purchase the minimum of 500 direct. We also eliminate the large letter of credit requirement and make the purchase of Showtime and the Movie Channel affordable.

Like our program for the hotel market, we do not by-pass you, rather we deal directly through you and support you.

In order to become part of our dealer program, we requires you to complete the three listed for the Hotel/Motel/Hospital market. Enclosed are the Participation or Dealer agreements with credit application and a property type form. Once we have received these forms, we will then send you the property authorization forms. These also include the procedure to address the video cypher units.

We offer, in addition, construction leads for large apartments and condominums - currently we have access to construction in California, Washington, Alaska, Oregon, Idaho and Montana. If we feel this is a receptive service, we will expand our territory to include all the USA. We do not however guarantee jobs from these leads. Presently, we are nogotiating with a large hotel chain to supply systems and programming. It we are successful, we will be passing all construction contracts (including the profit), along with the programming contracts to those dealers who are in our program. We feel that if we provide a marketing service at no charge, your time becomes more profitable. We only require that all programming must come through AMPAC Communications.

If you wish to discuss any further aspects on the above, please feel free to phone at any time (during business hours).

DEALER PROGRAM HOTEL, MOTEL, HOSPITALS

AMPAC Communications offers a complete programming service for the hotel/hospital market. Our program establishes a permanent income for your company and gives you the opportunity to compete in the open market to supply premium and basic programming at a fair price.

We believe our program to be unique in that in distributing programming, we do not by-pass you, rather we deal directly through you and support you, ensuring that you have direct control of your customers present and future needs.

The following is briefly what we require and offer:

Requirements: (1) Complete a participation agreement, (2) complete a credit application, (3) complete a property type list you intend to commence with.

We Offer: (1) National advertising will commence later 1986. (2) Leads that come to us will be forwarded immediately to you with any additional information that we may possess. (3) You bill your customer direct, or we will bill on your behalf and send you a monthly profit check. We assume the contractual liability to the programmers under this arrangement. (4) Monthly channel guides.

SCHEDULE I.—*SMATV tariff*

Showtime/the movie channel:	
0 to 499 subscribers (per sub per month)	$4.95
500 plus subscribers (per sub per month)	4.75
Nashville	0.30
WGN Chicago	0.15
CNN	0.35
ESPN	0.25
CBN	free
C-Span	0.10
PTL	free
WTBS Atlanta	0.15
USA Network	0.20
WOR NJ	0.15

Payments must be made by the 15th of the following month. Payments not made by the 15th will incurr a 2% surcharge per month.

Note.—No upfront set-up fee is required for any of the above services.

ASSOCIATION OF INDEPENDENT TELEVISION STATIONS, INC.,
Washington, DC, July 29, 1986.

Hon. JOHN C. DANFORTH,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: Although INTV has not asked to testify at your July 31 hearing on commercial satellite scrambling practices, we do have a particular interest in one sub-set of the entire subject area: the scrambling, by resale common carriers, of distant independent broadcast signals.

With your permission, we would like to submit for your hearing record[1] a copy of testimony we are preparing for the House Subcommittee on Courts, Civil Liberties and the Administration of Justice which will hold a hearing on the issue on August 7, 1986. We would be able to get a copy of this statement to yout staff by that date.

Thank you for your consideration.

Sincerely,

JAMES B. HEDLUND,
Vice President, Government Relations.

M/A-COM DEVELOPMENT CORP.,
Rockville, MD, August 11, 1986.

Hon. JOHN C. DANFORTH,
Chairman, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, DC.

DEAR CHAIRMAN DANFORTH: M/A-COM, Inc. submits this letter to clarify the record of the hearing held July 31, 1986 on satellite video scrambling. We are specifically responding to the statements of Taylor Howard, a witness at that hearing, relating to the costs of the VideoCipher® II decorders. Our witness, James Bunker, was not permitted to respond to Mr. Howard's statements during the hearing. We ask that this response be inserted into the record at the appropriate place.

At the hearing, Mr. Howard indicated that the VideoCipher® II decoder is too expensive and that his company could do better. He claimed that the VideoCipher® II decoder contained redundant and unnecessary components. He claimed that his company could produce a home TVRO receiver with integrated decoding capabilities that would be far less expensive than the VideoCipher® II decoder.

Mr. Howard cleverly blurred the fact that the VideoCipher® II decoder was intended as a retrofit unit and designed to be compatible with over 95 per cent of the nearly 1.5 million home TVRO receivers now in use. For that reason, it includes components and circuitry that are able to interface properly with a vast and diverse population of different TVRO receivers. There have never been any compatibility standards for TVRO receivers. In order to achieve a high order of compatibility, the the VideoCipher® II decoder includes special circuitry. The selling price covers the cost of this circuitry.

The M/A-COM testimony talks about the next generation of TVRO receivers. By integrating the decoding capability into next-generation TVRO receivers, special interface circuitry will no longer be needed. The generation of TVRO receivers that will come to the market later this year will contain a built-in circuit module to accomplish the decoding.

The price difference between these two approaches is dramatic. The retrofit decoder has a recommended rtail price of $395. In contrast, M/A-COM will sell the integrated decoder circuit module to TVRO receiver manufacturers for $150. The difference is due to interface circuitry, plus the separate chassis, power supply and other components needed for the retrofit decoder. These circuits and components will not be needed when the module is built into the home TVRO receiver.

Mr. Howard was unfair, both to M/A-COM and to the 1.5 million dish owners, when he claimed that the VideoCipher® II decoder was too expensive. These dish owners cannot take advantage of the lower cost of built-in decoding modules unless they junk their current receivers. M/A-COM consciously tried to design the the VideoCipher® II retrofit decoder so as to minimize total costs for the 1.5 million dish owners and maximize the usefulness of their investment. In his comments, Mr. Howard disdainfully ignored their current investment and would have them start all over again with the purchase of a totally new receiver.

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[1] See printed hearing of House Judiciary Committee, Aug. 7, 1986 pp. —.

Mr. Howard was also technically incorrect in his statements. He indicated that the decoder module was simply a few special integrated circuit chips that could be added to the home TVRO receiver such as his company builds. To the contrary, the decoder module is a rather complex circuit board. It contains over 280 components, including 11 special integrated circuit chips.

It is regrettable that Mr. Howard intentionally misled the committee with this misinformation. Unfortunately, the recent history of satellite video scrambling is full of similar incidents. It is the misinformation provided by apparent industry leaders such as Mr. Howard that is largely responsible, in our view, for consumer confusion and the downturn in sales of home earth stations.

We are committed to licensing second source manufacturers of the decoder modules. Contrary to Mr. Howard's claims at the hearing, he and his company have not expressed any interest in manufacturing this module. Consequently, it is our view that Mr. Howard's statements to the committee on the subject of decoder costs are without merit and were delivered in bad faith.

I hope that this has helped to clarify the issue of decoder costs. If you have any further questions, we will be pleased to respond.

Sincerely,

JEFFREY KRAUSS,
Vice President, Corporate Affairs.

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